THE LANCET.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

CHARLES, H., M.R.C.S., L.R.C.P. Lond., has been appointed Anæsthetist to the Middlesex Hospital.

COOMBES, P. C., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Assistant Medical Officer of the Surrey County Asylum, Brookwood.

EMSLIE, BELL, M.B., Ch.B., has been appointed Third Assistant Medical Officer at the Stirling District Asylum, Larbert.

GREEN, T. A., M.D., F.R.C.S. Edin., has been appointed School Medical Officer to the Bristol Education Authority.

HAWKSLEY, W. L., M.B., Ch.B., D.P.H. Liverp., has been appointed Assistant to the Medical Officer of Health for the City of Liverpool.

HEATH, H. LLEWELLYN, L.S.A., D.P.H. Cantab., has been appointed Temporary County Medical Officer to the Public Health Committee of the East Suffolk County Council in connexion with the Prevention of Plague.

LEGG, T. P., M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to King's College Hospital.

MACASKILL, D. C., M.B., Ch.B. Edin., has been appointed Second Assistant Medical Officer at the Stirling District Asylum, Larbert.

MILNE, R., F.R.C.S. Eng., has been appointed Extra Assistant Surgeon to the London Hospital.

REES, W. T., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Llanwrtyd Wells and Llandulas portion of Builth Union.

SUTHERLAND, H. G., M.D., Ch.B. Edin., has been appointed Medical Officer to the St. Marylebone Anti-Tuberculosis Dispensary.

SWAN, R. H. J., F.R.C.S. Eng., M.B., M.S. Lond., has been appointed Surgeon to the Cancer Hospital.

WALTON, A. J., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Dreadnought Hospital, Greenwich.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE.—Fifteen Commissions in the Royal Army Medical Corps.

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WREXHAM INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

MARRIAGES.

BRYAN—SMYRK.—On Oct. 27th, at the Parish Church, Henley-on-Thames, Frederick Bryan, M.B., to Ellen Smyrk, youngest daughter of the late Frederick Smyrk, of Waltham Cross.
TOVEY—PRIESTLEY.—On Sept. 10th, at St. Peter's, Wellington, New Zealand, Arthur Hamilton Tovey, M.R.C.S. Eng., L.R.C.P. Lond., to Florence, daughter of the late William Hudson Priestley, of Liverpool.

DEATHS.

BUCK.—On Oct. 27th, at Springfield, Upper Clapton, N.E., Henry John Buck, L.R.C.P. Edin., aged 74 years.
HALL.—On Oct. 25th, after a brief illness, at Elmsfield, Lancaster, William Hall, M.D., F.R.C.S., J.P., aged 60 years.
PENNY.—On Oct. 24th, at Worthing, Charles Burnage Penny, M.B., M.R.C.S., L.R.C.P. Lond., aged 34 years.
WELCH.—On Oct. 25th, at Carrsleigh Cottage, Southborough, Surgeon-Colonel Francis H. Welch, F.R.C.S., Medical Staff (retired), aged 71 years.
WRIGHT.—On Oct. 25th, at Castle-place, Nottingham, Thomas Wright, M.D., M.R.C.S. Eng., aged 88 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A QUESTION OF FEES.

"A Canadian Physician" writes to us on this subject in reference to the letter signed "M.B., F.R.C.S.," in our issue of Oct. 15th. He contrasts the gratuitous treatment which he himself received at the hands of an American consultant physician with the payment of fees to an English aural surgeon whose services he had sought for his child. It is quite clear that general rules of professional conduct cannot be founded on one or two special incidents, and, as a matter of fact, "A Canadian Physician's" experiences are contradicted by other communications which we have received on the same subject. Most English practitioners, general or consultant, in all ordinary circumstances give advice to brother practitioners gratuitously, devotedly, and without stint. All operating surgeons, especially those who acquire a great reputation in some particular line, and all specialists cannot in all circumstances attend all the children of all the medical men of all the nationalities in the world gratuitously. It follows that to a certain extent every case must be judged on its own merits.

THE PROGRESS OF INTELLIGENCE.

To the Editor of THE LANCET.

SIR,—The clear conclusion anyone must draw on reading the extensive and costly advertisements of irregular practitioners and quack medicine vendors is that intelligence among the educated classes is at a very low ebb. For the dupes and credulous believers, who indirectly pay the enormous cost of these advertisements, are not the poor and uneducated, but the well-to-do and educated. I have at the present time under my care a clergyman, two University men, and a well-to-do City man, all of whom have been duped. One, with atheromatous arteries and high blood pressure, underwent a course of physical culture cure at an enormous expense! I cannot get from them any answer to this simple question, Why do you believe these poorly educated persons know more about disease than professional men whose education is special to the subject?

I am, Sir, yours faithfully,
New Cavendish-street, W., Oct. 29th, 1910. THOMAS DUTTON.

AN IMPROVED RAILWAY MILK-CHURN.

Mr. Harold Wickham, of "Caldbec," Station-road East, New Oxted, has submitted to us for inspection a model of his improved railway milk-churn, the chief merit of which is its dirt- and dust excluding properties. The lid is deep and is removed entirely from the body of the churn in the same way that a lid is taken off a tin canister. There is a bayonet joint fastening it down, and a padlock is provided to prevent any tampering with the milk on its journey. The arrangement obviously provides against the contamination of milk which it sustains too easily during its transit either by rail or cart in the ordinary churn. The top of the ordinary milk churn is often a veritable trap for dirt, which finds its way into the milk. In Mr. Wickham's churn provision for ventilation is made and the churn appears to us to be as easily handled and moved as the ordinary railway churn.

DOUBTFUL PROGRESS.

To the Editor of THE LANCET.

SIR,—My attention has been drawn to a pretentious volume, profusely illustrated, entitled "..... in the XX. Century, Contemporary Biographies," the name omitted being that of a southern county. I trust that this work is the first and may remain the last of the kind, for it contains names of 150 medical men, nearly all accompanied with portraits and notices, generally much in excess of that allowed in the Medical Directory, some indeed running to between 30 and 40 lines of self-commendation and genealogy. The volume ends appropriately with similar notices and portraits of veterinary surgeons and breeders of sheep.

It has been said that progress is to be sought in the north, but truly in the south our profession would seem to be moving on. Whither?

I am, Sir, yours faithfully,
Oct. 31st, 1910. SLOW COACH.

MARTIN'S INHALER.

THIS inhaler, which was sent to us for an opinion by Mr. H. H. Sharland, optician, of 7 and 8, Thavies Inn, Holborn-circus, E.C., is of the ordinary wash-bottle type. It consists of a square bottle made of blue glass, provided with a cork through which two tubes are fitted, one (the shorter tube) serving as a mouthpiece, and the other a tube which dips into the medicament. The mouthpiece tube is provided with a valve which allows of the passage of the medicated air only in one direction, so that at no time can there be pressure in the bottle which would discharge the fluid through the dip-tube. We can see no special novelty about the inhaler; it is certainly simple, but doubt may be expressed as to whether it is as effective as other forms.

WANTED, A SUGGESTION FOR TREATMENT.

To the Editor of THE LANCET.

SIR,—Can any of your readers offer me any suggestions as to the treatment of my case? I am 70 years of age and in good health, no gouty or rheumatic history, no deposits or contractions of the tendons, abstainer, and eat moderately of animal food. For the last three months I have had some rheumatic arthritis in my knee-joints, with slight effusion. If I go out for a day's shooting I am stiff in my knee-joints for several days and there is always some tenderness and stiffness remaining. I have tried pot. iod., sod. sal., guiacol carb., and the Tallerman heat; the latter does me good, but I do not like to think that this common condition has "come to stay," and should be thankful for any help. I am, Sir, yours faithfully,

Nov. 1st, 1910. M.D.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1910:—

Nov. 4th–12th (London).—Ninth International Motor Exhibition.
" 7th–12th (Cape Town).—Twelfth South African Medical Congress (1910).
" 11th–19th (London).—Stanley Exhibition.

In 1911:—
May–October (Dresden).—International Hygiene Exhibition.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September (Brussels).—Exhibition of Fractures.
Sept. 11th–16th (The Hague).—Thirteenth International Congress on Alcoholism.
" 18th–23rd (Sydney).—Australasian Medical Congress.
" 24th–30th (Rome).—International Congress on Tuberculosis.
" 25th–29th (Rome) Seventh International Congress of Dermatology and Syphilology.
October (Cologne).—International Congress of Criminal Anthropology.

In 1912:—
September (Prague).—International Congress of Radiology and Medical Electrology.
September (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
September (Washington, D.C.).—Fifteenth International Congress of Hygiene and Demography.

In 1913:—
(London).—Seventeenth International Congress of Medicine.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.
SURGICAL SECTION (Hon. Secretaries—Jonathan Hutchinson, L. A. Dunn): at 5.30 P.M.
Debate:
On the Treatment of Fractures in the Neighbourhood of Joints (opened by Mr. Robert Jones (Liverpool) and continued by Mr. Warren, Mr. Lett, Mr. Whitelocke, Mr. H. J. Paterson, and others).

FRIDAY.
CLINICAL SECTION (Hon. Secretaries: Albert Carless, James Galloway): at 8 P.M.
Cases:
Dr. A. H. Miller: (1) Adiposis Diffusa; (2) Multiple Lipomatosis.
Dr. Eric Pritchard: Adiposis Diffusa.
Dr. R. Farquhar Buzzard: Tabes with Lumbo-sacral Arthropathy.
Dr. Arthur Latham: Infective Endocarditis, Blood becoming Sterile after Fifteen Months' Vaccine Therapy.
Dr. James Galloway: Painful Necrosis of Extremities.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, Bloomsbury-square, W.C.

TUESDAY.—8 P.M., Mr. E. H. Farr and Mr. R. Wright: A Critical Note on Several Processes for the Determination of the Alkaloids in Colchicum Seeds.—Mr. H. Finnemore: Chemical Examination of a Series of Prunus.—Prof. H. D. Greenish and Miss D. Braithwaite: The Drug Room Beetle (Sitodrepa Panicia) (illustrated by lantern slides).

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5.30 P.M., Major C. E. Pollock, R.A.M.C.: Malingering.—Major S. L. Cummins, R.A.M.C.: Guinea-worm in Egypt.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Clinical Meeting.

SOCIETY OF MEDICAL OFFICERS OF HEALTH, 1, Upper Montague-street, Russell-square, W.C.

FRIDAY.—5 P.M., Mr. W. A. Gant (Cambridge): The Foundation of School Dentistry.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

TUESDAY—5 P.M., Sir T. C. Allbutt, K.C.B.: Greek Medicine in Rome. (Fitz Patrick Lecture.)
THURSDAY.—5 P.M., Dr. W. Bulloch: The Problem of Pulmonary Tuberculosis considered from the Standpoint of Infection. (Horace Dobell Lecture.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Mr. Shattock: Specimens illustrating Injuries and Diseases of Arteries. (Museum Demonstration.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. D. Ferrier: Traumatic Neuroses.
TUESDAY.—4 P.M., Dr. P. Parkinson: Clinique (Medical). 5.15 P.M., Lecture:—Mr. F. C. Wallis: Cancer of the Rectum.
WEDNESDAY.—4 P.M., Mr. J. Cantlie: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. F. C. Wallis: Cancer of the Rectum.
THURSDAY.—4 P.M., Dr. W. Carr: Clinique (Medical). 5.15 P.M., Lecture:—Mr. F. C. Wallis: Cancer of the Rectum.
FRIDAY.—4 P.M., Mr. E. Clarke: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. R. Lloyd: Anæsthetics.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Pritchard: Medicine.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. C. Hughes: Anæsthetics.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Ulceration of the Cornea.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Dr. C. O. Hawthorne: Infantile Scurvy.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).
TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. H. Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient: (Dr. A. J. Whiting). 4.30 P.M., Lecture: Mr. Carson: Acute Abdominal Conditions.
WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. A. E. Giles: Vicarious Menstruation.
FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. Howell Evans). 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

MONDAY.—5 P.M., General Meeting.

LONDON HOSPITAL MEDICAL COLLEGE, Clinical Theatre, London Hospital, Mile End-road, E.

TUESDAY.—1 P.M., Clinical Surgery Lecture:—Mr. R. H. Fenwick: The Diagnostic Aspect of the Pain in Kidney Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Howell: Specimens illustrating the Pathology of Paraplegia.

FRIDAY.—3.30 P.M., Clinical Lecture:—Mr. P. Sargent: Cervical Ribs.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Dr. Atkinson: Nose.

FRIDAY.—3.45 P.M., Dr. D. McKenzie: Labyrinth.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Inman: Laboratory Diagnostic Methods.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis (continued): Papular (I., Miliary; II., Lenticular; III., Squamous; IV., Moist). Pustular and Tuberculous.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. Bythell and Dr. C. Moore: The X Ray Examination of the Stomach by means of Bismuth Meals. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.),

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 2nd, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 27	29·94	E.	...	63	57	53	52	54	Overcast
,, 28	29·69	S.E.	0·29	92	61	50	50	51	Raining
,, 29	29·84	E.	0·04	62	55	49	50	50	Overcast
,, 30	29·90	N.	...	60	52	46	47	49	Overcast
,, 31	29·92	N.	...	63	56	45	45	47	Overcast
Nov. 1	29·10	S.W.	0·43	77	53	47	48	49	Raining
,, 2	29·23	N.W.	0·03	69	48	41	39	42	Cloudy

Communications, Letters, &c., have been received from—

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K.—Mrs. H. Kayler, Mixbury; Dr. A. M. Kennedy, Glasgow; Mr. H. Kent, Lond.; Mr. H. Kemp, Lond.; Dr. Knight, Edinburgh; Kent County Ophthalmic Hospital, Maidstone, Secretary of.

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ON

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Delivered at the Royal College of Physicians of London

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REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE.

LECTURE II. *

PRESIDENT AND FELLOWS,—My last lecture ended with an allusion to the poison lore of the ancients, a literature in itself; with an allusion therefore I had to be content for time presses, and we must turn to other and less sinister subjects. And none in this period is of greater historical interest than the pulse doctrines.

Pulse doctrine.—Broadbent, in the introductory chapter of his treatise on the pulse, set forth the Galenic doctrines sufficiently for his own purpose; but on this occasion we may fitly endeavour to trace more fully and particularly the researches on the circulation of the blood from more ancient times, from Praxagoras of Cos, in the succession of Diocles, through Athenaeus down to Galen, to whom we are chiefly indebted for what we know of the subject. That to feel the pulse was a common practice we note incidentally in such comparatively early passages as:

> "Tange, miser, venas,
> ..... nil calet hic."
> (PERS. Sat. IV.)

and "*Et peragit soliti vena tenoris iter*" (Ovid in Letter X. to Flaccus, speaking of cold and languor without fever). Galen wrote many essays on the pulse, and from his fourth, fifth, eighth, ninth, and nineteenth books, in which he gives a summary and a criticism of the various pulse doctrines from Herophilus to Archigenes, especially in the Περὶ τῶν σφυγμῶν and the Περὶ διαφορᾶς τῶν σφυγμῶν (IVth Book); and from some other sources, as in a certain pseudo-Galenic pneumatist treatise, from a pseudo-Soranic tract published by Rose (Anecdota Gr. II.), and especially from the treatise on the pulse usually attributed to Rufus of Ephesus, a fairly definite reconstruction of the pulse-lore of the ancients has been attained. Galen's main source was a lost treatise—Περὶ σφυγμῶν—of Archigenes,[47] some fragments of which he quotes; though the first treatise on the pulse (Περὶ παλμῶν) was written by Aegimius of Elis, of the period of Hippocrates. But I may take Praxagoras as the first physician to give the pulse its due place in diagnosis and therapeutics. Unluckily Praxagoras taught that the arteries were air channels only, a dogma which provoked grievous dissensions, errors, and abuses through later ages. It would seem that Chrysippus also had emphasised the value of the pulse as a criterion of fever.

In the next place we come to Erasistratus, who described the valves of the heart, the chordæ tendineæ, and the several regions of the arteries and veins in heart and liver more accurately than Herophilus, whose attention was directed rather to the anatomy of the brain. Erasistratus showed by experiments that the arteries contained blood, and he recognised the function of the heart as the prime mover of the circulation. This great master got very near the truth of the circulation, to a point of view too soon to be perverted by pneumatist and other notions, for which he himself was not altogether without responsibility, or, indeed, to be lost sight of in that empirical indifference to anatomy to which I have referred. This insight of Erasistratus (c. 340–324 B.C.) is of much historical importance; for, as we have seen in respect of Praxagoras, before his time the arteries during life were supposed to contain air only—thin air, breath, vapour, spirit, pneuma. It is well, therefore, to quote the very words attributed by Galen (V. 552) to Erasistratus, which are as follows: ἅμα μὲν ἀρχὴν καὶ ἀρτηριῶν καὶ φλεβῶν εἶναι τὴν καρδιάν, ἅμα δὲ τοὺς ἔξωθεν ἔσω νεύοντας ὑμένας ἐπὶ τοὺς εἰσάγουσι τὰς ὕλας ἀγγείας ἐπιπεφυκέναι, φάσκοντος. This Galen repudiated, for how, said he, could the veins originate in the heart when the blood for them is made in the liver? The remarkable hypothesis by which Erasistratus endeavoured to reconcile the new and the old notions of the arterial contents was, that at certain undefined places in the circulatory tree there were communications—anastomoses—between the veins and the arteries; channels which under ordinary circumstances he seems to have assumed to be closed or but sparingly permeable, but in case of lesion or disease opened, so that the blood streamed into the arteries (παρέμπτωσις) and became one of the causes of fever. To this hypothesis in respect to hæmorrhage we shall return, for certain therapeutical means were founded upon it.

Yet strangely enough, both as regards the physiology of the circulation, and in medicine, the Erasistrateans paid less attention to the pulse than did the Herophileans, perhaps because of their reluctance to bleed. In their clinical appreciations Herophilus and his immediate disciples seem to have been properly content with four excellent indications of the pulse—namely, size, strength, rate, and rhythm; but the later disciples of his school too sedulously and fancifully overargued its signs, splitting them into a multitude of unreal categories. Archigenes, of whose elaborate treatise, under the title of Περὶ σφυγμῶν, Rufus gives some account, and of which some excerpts have survived, in his recognition of eight categories only "as generally known," was economical. However, his modest eight, it would seem, we must make into ten; for on turning to Daremberg's Rufus we find that "hard and soft," as qualities of "systasis and dialysis," are to be distinguished from "strong and weak," as qualities of tone. These eight, or ten, categories (λόγοι) Galen appears, from his two works on the pulse and a certain pseudo-Galenic chapter, to have adopted (Wellmann). These and other minutiæ, such as pulses hot or cold, dry or moist, &c., if in themselves idle or absurd, are nevertheless serviceable as clews to traditions and authenticities.

When from such records as remain we endeavour to reconstruct the pulse and respiration doctrine of the Pneumatists in the time of Athenaeus—say in the reign of Claudius—they seem to have been after this form. The pneuma, divine energy, or world-soul, permeated the body as πνεῦμα ζωτικόν; but, as Erasistratus taught, it reached the heart by respiration through the lungs as πνεῦμα ζωτικὸν and πνεῦμα ψυχικόν; whence the πνεῦμα ζωτικὸν "sped like a bird" through the arteries and the body, while the πνεῦμα ψυχικὸν was delivered to the brain (Chrysippus). Now as the pneuma reached the heart it met with the blood, both in the arteries, which had their roots in the heart, and in the ventricles; but in the ventricles crasser blood was in excess, in the arteries pneuma. "The arterial blood was thinner, purer, and redder." It seems at this time to have been generally held, in spite of Erasistratus, that the veins had their roots in the liver.[48] The movements of the circulation, systole and diastole, were kept up by the innate heat, identified by the pneumatists with the pneuma, as a single entity; and the harmonious rhythm of these motions was a sign of health. Thus the Praxagorean notion, that the arteries contained pneuma only, appears for the time to have been definitely set aside; though in comparing these records we are often perplexed by equivocal terms. Aristotle seems to have been unaware of the distinctions of Praxagoras between arteries and veins, except in respect of the aorta and venæ cavæ; and he supposed the heart to consist of but three chambers. Especially in this respect we are perplexed in Aristotle, and elsewhere, by the uncertain meaning of the word φλέβς, or *vena*, although Herophilus and Erasistratus clearly distinguished arteries from veins, and the left from the right heart. Celsus, whose testimony in respect of Alexandria is very important, uses *vena* to signify blood-vessels (including arteries); yet he uses the word "*arteriae*" also, on the whole with a definite meaning, and anatomically in our sense—as, for example, "itemque arteriae quas καρώτιδες vocant" (IV. 2); though we observe that with them he classes that main pneumatic channel the *aspera arteria*, or windpipe. And here I may conveniently anticipate matters so far as to say that Galen must have accepted the truth that the arteries contained a

* Lecture I. was published in THE LANCET of Nov. 5th, 1910, p. 1325.

[47] For these paragraphs I am again indebted to Wellmann in his *Pneumatists* and in Susemihl; to Daremberg's *Rufus*; to Celsus himself; to the relics of Archigenes, &c.; and to various commentators on Aristotle and the later sources.

[48] It is worth notice that the Chinese to this day, I am told, think that the right pulse tells the state of the liver, the left the state of the heart.

redder and more ethereal blood[49]; for, as we all know, he assumed the existence of pores in the ventricular septum. He was also aware that the heart was the centre and source of the pulsations, and showed experimentally that if an artery were ligatured—the femoral, for instance—pulsation continued between the ligature and the heart, but ceased beyond it; an observation however which, if taken alone, would not have satisfied those pneumatists who attributed pulsation to the throbbing of the pneuma only, an idea which may now occupy our closer attention. With Galen the difficulty was to understand how Nature, "which does nothing in vain," came to make two different kinds of vessel for the carriage of the blood.

It seems to me then rather difficult in the obscurity of the traditions to discriminate between the great Alexandrians as concerns their anatomical and physiological views respectively, or, indeed, to compare them with precision, though it is clear that in the clinical observation of the pulse the Herophileans were distinctly in advance; but it is probable that not Herophilus only, but also the contemporary Alexandrian School generally, attributed the energy of the arterial pulsation to the heart as the chief seat of the animal pneuma, or innate heat. Moreover, herein they certainly established the important conception of the heart and blood-vessels as an integer, or functional unity; a conception in later times too often forgotten. The pulsation itself they divided into four periods—a contraction, an expansion, and two pauses. Whether both these motions, or only one of them, used energy seems to have been a point of some disagreement; though, as the distinction between cardiac and arterial systole is often obscure, and is not always made quite clear even by Wellmann, it is not quite easy to be sure of the grounds of this dissent. However, to start with, we ascertain from a passage in the 8th volume of Galen (755) that, although in the Herophilean opinion (Susemihl) the systole only used energy, the diastole being mere recoil, according to the later (Roman) school of Athenaeus energy was expended both in systole and in the diastole. The passage being an important one I quote it in the original: "οἱ δ' ἀπ Αθηνάιου πάντες, ὥς εἰρηται, τὰς κινήσεις ἀμφοτέρας ἐνεργείας ἡγοῦνται, τήν τε ἐν τῷ διαστέλλεσθαι γινομένην καὶ τὴν ἐν τω συντέλλεσθαι."

Now in some sentences it appears to me that, contrary to our customary use, by systole was intended the lift of the artery, whereas in others, as where it is disputed whether the systole of the pulse can be felt or not, clearly the arterial fall was intended. Moreover, it has been pointed out, I think already on a suggestion of the late Professor Magnus, that many of these writers, at any rate, supposed the heart and the arteries to swell and collapse together; this I had myself observed and illustrated by the following passage: "δίόγκωσις καὶ συνίζησις αἰσθητὴ καρδιάς καὶ τῶν ὁμοιοπαθούντων αὐτῇ." Dicroty, as we gather from Galen, was regarded as a second weaker beat; an explanation which he accepts, comparing it to the second tap of the hammer on the anvil, the anvil being the σκληρότης (inertia) of the arterial wall (σῶμα).

The Roman pneumatists, even of the ability of Archigenes, hampered as in part they were by the Methodist abstractions of *strictum* and *laxum*, lost sight of some invaluable clinical inferences from qualities of the pulse, which had been perceived by the Alexandrians, and which Galen restored. For instance, these later pneumatists—as we find in Athenaeus, Agathinus, Herodotus, and Archigenes—got entangled in arguments between blood content and pneuma content; and between tone (τόνος) as pneuma, and tone as a quality of the arterial wall (κατὰ τὸ σῶμα τῆς ἀρτηρίας). In such fragments of Archigenes as we possess (Wellmann) we find this confusion between blood content, pneuma content, and arterial wall. And I may note here, a little before due time, that, so far as I know, Galen was the first to point out that the arterial wall is liable to sclerotic degeneration. So, if we try to get behind these confusions, we shall apprehend that the Alexandrians, nurtured in a more scientific school, had in respect of the circulation perceived certain most important truths afterwards obscured, and that to these forerunners Galen owed not a little, how much we cannot now tell. I may add further this notable instance, that in respect of plethora the difference was then discerned between a long (or sustained) and a short beat, as definitely contrasted with degrees of frequency of beat; and again between the "broad" (πλατὺς) pulse—as of a relaxed artery with large output, and an ill-filled pulse. The high pulse (*celer*) of the former case was also described by them; so that they regarded the big pulse (μέγας) in three dimensions.

In systole the pneumatists considered that air (pneuma) was drawn in, and in diastole the fuliginous excrement expelled; thus they forwarded the scientific conception of diseases as perversions of the normal. It was especially true of Erasistratus that he fully grasped this idea, only too soon to be vitiated, that disease is a perversion of health, of the normal processes; not a condition contrary or foreign to biological nature. To take a very interesting example: to those of my hearers who are conversant with music the name of Aristoxenus of Tarentum, a pupil of Aristotle, is not unfamiliar, as of one who conceived, or on behalf of his musical tutor recorded, a masterly contribution to the theory of music. Now Aristoxenus flourished in the fourth century just before Herophilus; and it is interesting to find that in his description of the rhythm and arrhythms of the heart Herophilus used the terms of Aristoxenus. For example, in illustration of the idea of morbid as but deviations from normal processes, Herophilus distinguished certain cardiac rhythms as characteristic of periods of life. The rhythm of infancy, he said, was a pyrrhic (∪∪); of adolescence a trochee (-∪); of middle life a spondee (--); of age an iambus (∪-). I am not now concerned to justify these descriptions precisely, but to present them as patterns of method, and of a sound kind of pathology. After him Archigenes likewise described and compared taxic and ataxic pulses—gallop rhythms, palpitations ("spasms") of the pulse and the like—as various degrees of deflexion from the normal into the abnormal. This fruitful conception of the nature of disease unfortunately became distorted by demonology with its magical cures; and also by the kindred if more spectral hunt of the metaphysicians after "morbid entities," a cry which finds an echo in the words of some eminent physicians even of to-day.

After the pulse lore of these schools, I would make some reference to their doctrines on *sexual generation;* for herein also we revere the memory of our immortal Harvey. And when, in comparing his results in this field with those on the physiology of the circulation, we dare to reflect that, as in the times of which we are speaking, even supreme genius cannot penetrate far beyond the limits of contemporary knowledge and means of research, we cast no shadow on that great memory. The problem of generation, as it presented itself to the ancients, is too difficult to put succinctly without a renunciation of much of its detail and of the history of many tides of opinion. Moreover, to make the argument comprehensible, I cannot quite confine myself to the pneumatists; I must make some more general reflections upon its phases from Hippocrates through Aristotle to Galen, that I may indicate the stage where the pneumatists came in. Our sources in this respect are, however, very scanty, and turn chiefly upon what is recorded in Galen's Περ. σπέρματος (IV., 593).

Concerning the respective virtues of male and female in the generation and development of the embryo, the opinion of Hippocrates is clear—that the ovaries corresponded to the testes, and that male and female both contributed seed. The superb anatomy of Vesalius left this physiological notion of the matter unaltered, until the seventeenth century when it was undermined by the labour of Highmore, Stensen, and de Graaf. After Hippocrates we come to the opinions of Aristotle, which are too well known to need a careful description here. Suffice it to say that this great sage firmly and consistently denied that the female contributed seed; the semen, the finest concoction of the male blood, as a dynamic element (τὸ ἄρρεν ποιητικὸν) quickened the passive but plastic female element (τὸ θῆλυ παθητικὸν),[50] enduing it with "form." He saw no difficulty in the resemblance to the mother; for did not plants vary with the soils in which they might be

[49] We know that Galen wrote an essay entitled Εἰ κατὰ φύσιν ἐν ἀρτηριάις αἷμα περιεχέται.

[50] It is usually supposed that Aristotle took the σπέρμα to imply the body of the fœtus; he seems to have given too much content to the σπέρμα, but "form" is far from signifying structure. As we gather from the Eumenides, concerning the appeal for the acquittal of Orestes, the idea of deposit of the embryo by the male to be nourished by the female, as in a nest, was far older than Aristotle, and contains far more than "form." But we must remember that in early times the differentiation of notions to which we are accustomed had not been accomplished.

planted? He admitted that in the catamenia the female contributed some kind of generative substance (γόνη), but contrasting it with σπέρμα, held that it was but of a rudimentary kind. His objection against the seminal contribution of the female, that she could be impregnated without orgasm, and even unconsciously, was less adequate; and how often are we tempted to think how happily we could have jogged the elbow of a great scientific father and supplied him with just the notion he needed. For Aristotle had a good knowledge of the egg, and how well the ovum would have fulfilled his argument;[51] as Fabricius and Harvey perceived, and von Baer finally proved. Straton, so far as we can tell, seems not to have followed Aristotle's footsteps closely; he dwells more, as did some other authors, on prepotency, and assumes that in particular cases the prepotency might have lain with the male or the female. Next we come to Alexandria, and to Herophilus who described the ovaries (δίδυμοι), and the tubes (σπερματοκοὶ πόροι); but this more accurate anatomy did not reveal more physiology. So far as it went, indeed, it seemed in favour of seed in both sexes; but the Aristoteleans, magnifying the content of the σπέρμα, fancied that these female parts were but a "structural harmony," after the kind of the male mamma. It is notable that Falloppius, himself a master in this field of anatomy, and pursuing the same positive methods as Herophilus, scrutinised the ovaries and vesicles minutely in search of a seminal element and, finding none, also denied seed to the female. And we may suppose that Harvey, in holding the same opinion and denying that the ovaries, to which he attributed a rather fantastic function, were an equivalent of the testes, followed Falloppius. But to come to the pneumatists: Athenaeus, and Archigenes who followed him, seem to have been the last physicians of the period to rely upon Aristotle; they denied seed to the female, and Athenaeus seems to me to be even more dogmatic about it than Aristotle himself. Galen, however, definitely did attribute dynamic seed to both female and male. The old demur that the progeny were as prone to resemble the mother as the father, for Galen held no difficulty; he assumed that each sex afforded a seed endowed with both virtue and substance (δύναμις and ὕλη); and yet he betrays a curious uneasiness about it, for how is it, he candidly asks himself, that the female never conceives alone. As to the preparation of semen as a perfected product of the blood, in this respect Aristotle seems to have followed Democritus, Hippocrates, and Praxagoras in a speculation which reminds us of Darwin's idea of pangenesis; in the pneumatico-stoic opinion, however, the semen was sublimated from the hegemonic spirit in the heart.

Influence of Pneumatism on Medicine.

Of this kind, then, so far as these limits permit me to unfold it, was the doctrine of the pneuma, a metaphysical idea foreshadowing vital combustion. And pneuma, whether under this name or in refluent waves of aboriginal ideas under such names as the vegetable and animal souls, of the Archaeus, of van Helmont's vital principle, of the animal spirits of Descartes, of the motor nervous fluid of Stensen, of the animism which in the early eighteenth century sprang from chemistry, of the vitalism again which sprang from the doctrine of irritability, or of the transcendent vital quality beyond physico-chemical virtues entertained by some leading physiologists to-day—πολλῶν ὀνομάτων μόρφη μία—must, in so far as it is an imported entity, make a free pathology and an inductive therapeutics almost impossible. And meanwhile the humoral pathology had to be counted with, even by the pneumatists. If the pneuma might become hot and dry as in fever, cold and moist as in dropsy, too dense or too light with many consequences; or again, too quick or too sluggish: if it might be pent up, as in epilepsy and constipation, or, as in hysteria, imprisoned in the womb, so again the humours also might be crossed, or crossing, in one or more of the many possible permutations of dyscrasia. The Hippocratean doctrine was that health and disease depended upon the crases of qualities. That health consisted in a eucrasia was, it is said, an axiom of that spectral sage Alcmaeon of Croton; and the conception of diseases as modes of the many possible dyscrasias survived down to Galen and, by him regenerated, flourished as we know in a crude form through the Middle Ages; and in a sublimated form has yet a great part to play in pathology. These humoral doctrines the pneumatists did not abolish, but made their intricacies still more complicated, coiling them into a mesh which at present we have no leisure to unravel; curious as is the study of an intense mental hunger, with but a scanty harvest of knowledge, feeding upon itself. And not only in the first and second century A.D. in medicine, in Neoplatonism, and in the Christian Fathers, but again in the thirteenth century, and in the ingenious literature of the sixteenth and seventeenth century against which Sydenham led so masterly a revolt, we see history thus in principle repeating herself. It was well therefore that the empirical reaction initiated in the earlier Alexandria by Philinus the Coan and Serapion, narrow and ungenial as they seemed, and, more fruitfully and scientifically, the admirable surgery of the age curbed the extravagance of the pneumatic and other metaphysical opinions; and this protest it was which made the pneumatist sect strictly so-called, although backed by the Stoics, but a transient phase.[52] Indeed, its own greater men almost from the first had begun to hedge by a prudent eclecticism. And it is true that their central doctrine of the pneuma was less prejudicial to surgical progress, which they forwarded upon Alexandrian anatomy, than were their unbridled expatiations, a wasted or even a mischievous energy, in the field of inner medicine. That the pneumatist emphasised the dynamic side of physiology is true also; and that, like the methodist, he recalled attention to the solids of the body; yet, by personifying the pneuma as an indwelling and creative entity, he provoked a reduction of the functions of growth, work and excretion to a passive machinery worked by a demiurgical finger: thus the whole framework of digestion, for example, became for him a mere gizzard, a mill for mechanical contrition of food; and therapeutics became a magical checkmate of the malignant. Now the methodist, or at any rate the Lucretian atomist, before the formalist Themison, while animated no less by the dynamic idea, had regarded energy more truly as one aspect of a quick matter than as the demonic master and manipulator of an engine. And the sceptics of the day, on narrower if surer ground, were teaching, almost with the decision of Locke, that thought can only be built upon the functions of the senses. Even for Diogenes of Apollonia[53] phenomena, the pneuma having condensed into them, were but phenomena, not outside realities; and concepts therefore were fashioned wholly of the products of our senses. The defect of these critical schools, at any rate of the Empirics who did not realise that we see what we are trained to see, was, as I have explained, an intolerance even of the chaster Hippocratean reasoning on causes, and a repudiation of anatomy which reminds us of Sydenham's aversion from pathology. Difficult as it is then to define our distinctions between the later Herophileans and Erasistrateans, or even to contrast the persons and doctrines of the two great leaders, yet it would seem from the course of events, and from Galen's testimony, that on the whole Herophilus had more of the utilitarian bent, while Erasistratus was of a more speculative temper; for Galen accuses him and his followers of scoffing at the clinical school of Hippocrates in a manner which Galen regarded as unmannerly and cavilling. But probably, as I remarked last year, Erasistratus also scoffed not so much at Moses as at the Mosaic dogmatics; while for Herophilus Haeser vindicates some balance of observation and reasoning, some use of theoretical explanations. Celsus in his invaluable preface, while attributing to Erasistratus also some measure of the empirical temper, says again of this point of view that, although basing its practice upon the more manifest of them—

[51] See the eighteenth chapter of the "De Generatione Animalium"; and also the "De Anima." After these lines were written I read in the British Medical Journal (August 13th, 1910) a very able and interesting article, signed "J. W. B.," on Dante's knowledge of Aristotle's "De Generatione," and noted that in Dante's words we might observe a strong infusion of the pneumatic doctrine. I venture, however, with great respect to question if Dante's account of the accretion or supervention of the animal upon the plant soul can be interpreted as a "flash of insight" into our modern idea of the embryo "climbing up its own genealogical tree." His phrases seem to me to contain no more than we meet with not infrequently in ancient and medieval speculation, and we must beware of importing into them concepts of our own.

[52] I venture to repeat that Gomperz has liberally insisted that, whatsoever the inconsistencies within the faculty itself, this service for a more positive method and influence was one for which ancient philosophers were indebted above all to Medicine.

[53] Cf. Krause, loc. cit.

upon the *causas evidentes*—it did not refuse to consider obscure and remote causes: *causis obscuris omnibus, non a cogitatione artificis, sed ab ipsa arte rejectis.* So Jack Wilkes "was never a Wilkite." It would appear notwithstanding that the concentration of Herophilus upon present symptoms—such as the pulse for instance, on immediate or at any rate proximate causes, and, in common with his great contemporary, upon anatomy both normal and morbid, established a pragmatic bent which in the practice of his disciples, if not in his own, led to over busy interference, to much drugging, and to excess of venesection; while the Erasistrateans, as reflected in their disciple Asclepiades, reasoning upon wider and remoter causes also, and becoming sceptical of therapeutical prowess, pursued a more expectant method. That accordingly Herophilus abode in the four humours, while Erasistratus discarded or neglected them, if in part it explains the antagonism of Galen to the Erasistrateans, still carries with it more history than this. For if the humoral doctrine involved its disciples in a mess of pharmacy from which the Erasistrateans won their freedom, yet on the other hand it would seem it was this inclination from the juices towards a dynamic or pneumatist conception which gave countenance to the opinion of Praxagoras, conveyed by Straton, that the arteries contained air rather than blood—an error of momentous consequence. What Galen did afterwards was to force both empirics and methodists back to study anatomy, to scrutinise causation only too meticulously, and to restore and develop the elemento-humoral tradition; while in his physiology, under the guises of the psychical soul and of a divine teleology, he perpetuated some pneumatism. Thus, while phlegm was interpreted as moist, yellow bile as hot, black bile as earthy, upon these were worked in the three entities of the soul; the animal soul having its primary reception in the pulmonary veins. A great part of our difficulty in distributing these sources and phases of opinions lies in what was Galen's own misfortune likewise, that, rich as by tradition may have been his physiological and clinical inheritance, he, like ourselves, was deprived of historical sources; for even in his day the destruction of manuscripts—as, for one instance, in the siege of Alexandria by Cæsar—had been already disastrous. We know that in the time of Galen, and probably of Celsus also, the works of Erasistratus had perished; and still more unhappily certain histories of medicine under the names of Hermippus of Smyrna (Περὶ ἐνδόξων ἰατρῶν), Andreas of Karystus, and of Histomachus were lost (Haeser). No insubstantial deliverance of medical tradition was notwithstanding handed down to the third century, if in a more impalpable form than of parchment, through Asclepiades, Themison, Archigenes, and many others over whom oblivion has cast her poppy;[54] and above all things the Hippocratic series of manuscripts had been preserved in other libraries.[55]

The brilliant progress of Alexandrian anatomy would in itself suggest that in morbid anatomy also advance was not wanting; although, in the early destruction of the records, and under the overgrowth of the later metaphysical cobwebs, much of it fell into oblivion. But that necropsies were then made for the investigation of disease is well known. For instance, a statement of Erasistratus has survived that in some cases of dropsy the liver was condensed, and as hard as a stone. In Alexandria pathological dissections were probably obtained without difficulty; in Rome the current prejudice against them was prohibitive, and so persisted even into the fifteenth century, when the Florentine, Antony Benivieni—the friend of Ficino and Poliziano—made it yield to his ardent importunities.

HYGIENE.

The hygienic and therapeutical doctrines of the pneumatists, and of the eclectic or "episynthetic" physicians who assimilated the more effective results of methodist, empirical, and other schools of the period, were of considerable interest and importance. The surgery of the school especially was excellent, and it is a matter of grave regret that of its records but little is extant. If in the light of recent researches our standard histories of the surgery of this period need revision on some points, yet on the whole it has been set forth almost as fully as the materials permit, so that I will not now dwell upon it. I will turn rather to the hygiene of the period, as of peculiar interest to us who at this moment are occupied with the medical aspect of education, to note the close attention this branch of the public service had received from the Greek physicians in Rome. Celsus, from the point of view of a Roman gentleman, gave some excellent hints on this subject; and the following interesting fragment of Athenaeus is preserved in Oribasius (III. 164): "χρήσιμον δε ἡ μᾶλλον ἀναγκαῖον πᾶσιν ἀνθρώποις ἀπὸ ταύτης τῆς ἡλικίας ἅμα τοῖς ἄλλοις μαθήμασι συμπαραλαμβάνειν καὶ τὴν ἰατρικήν, καὶ κατακούειν τὸν ταύτης λόγον, ἵνα καλοὶ καὶ ἀγαθοὶ σύμβουλοι γενώνται πολλάκις ἑαυτοῖς τῶν εἰς σωτηρίαν χρησιμόν." For Athenaeus indeed medicine was even more than this, it was an integral part of a liberal education.

On airs—as of day and night, of hills and valleys, lunar and solar seasons, and of various climates—the pneumatists, as we should anticipate, laid great stress. Accordingly we find such airs described as moist or dry, hot or cold, dense or thin. Night air was cold and thick, and consequently apt to cause rheumatism, fever, and inflammation. I need not stay to interpret the warning that, of seasons, the air of autumn was the most dangerous; and that during these months one should never sleep out of doors. The air of towns was warm and thick, so that natives of towns were fat, and were sluggish in their secretions. The air of enclosed valleys was bad; and likewise the air of river flats and of marshy places. Inland air was said to be more wholesome than that of the seaside, an opinion derived perhaps from the malarious infection of estuaries, and of harbours, such as Ostia. Drinking water was to be filtered through porous stone or earth, but particularly to remove dirt and leeches.

Diels draws attention also to their careful adaptation of hygienic rules to the periods of the individual life. Still depending chiefly upon the reports of Oribasius and Aetius, which as regards Athenaeus, Agathinus, and Herodotus,[56] are fortunately copious, we find that the pneumatists regarded its course as of four stages—of infancy, of adolescence, of middle-age, and of old age. We shall note with particular interest that they discouraged all serious school work before the age of six or seven; then the child was to be taken in hand by a mild and kindly master, who would discipline the child by changes of work and play, carefully avoiding prolonged stress of either but encouraging him by emulation, finding for him a delight in learning, and remembering that severity or satiety engenders an aversion which in after life may never be overcome. From the age of 12, however, the work was made tougher, and the pupil led to feel his powers, and to put them forth in such studies as grammar. The master was to be well versed not only in intellectual matters but also in dietetics, in the wide range of exercises known as gymnastic, in the use of the bath, and particularly in the apportionment of the hours of sleep. Thus, as the boy grew up, bodily and mental development went hand in hand; and in adolescence, in order that every man should understand the conditions and promotions of a normal life, medicine and philosophy were introduced into the curriculum. Concupiscence was subdued in youth by gymnastics, and by the general discipline of mind and body. In maturity the generative function was to be approached with due sense of responsibility; and directions were given for the παρασκευὴ πρὸς τὸ παιδοποιεῖν. The sage council was given not to forget even in youth the prospect of old age and, as years wore on, to economise the efforts of body and mind, and to cut down the quantities of food; indeed, at all ages the food was to be reduced in warm weather. And with the exquisite greek sense of balance, even in physiology, and of the unity of bodily and spiritual function, they reminded us—for are not these lessons for all time?—that in a healthy old age we should seek to be wholesome not in body only, but gentle of soul also, high-minded,

[54] The reader will remember that the treatise of Celsus was either little known to the physicians of Rome in later generations, or was disregarded by them as the compilation of a Roman layman.

[55] As on Aristotle and Plato in philosophy, so in medicine transcripts and commentaries on "Hippocrates" formed the backbone of the tradition. Cicero refers to the writings of Hippocrates as well known. Galen, besides his other reverential services to the father of medicine, wrote, or proposed to write, a critical essay on the genuine and false treatises of the collection. If it was ever completed it is lost; but Mewaldt in an essay in Hermes (1909) studies some relics of it. The greater Empirics, such as Xeuxis and Heracleides of Tarentum, were loyally devoted to the great master.

[56] As, for instance, Orib. III., 107, "ἐκ τοῦ Ἀθηναίου." For the ready reference to these passages and comments upon them I am indebted again to Wellmann (loc. cit.).

never tiresome, in sympathy and fellowship lifting up the young with the fulness of sweet lessons from the past. In the education of women, while a wholesome interest in political affairs was not denied to them, they were advised to concentrate themselves upon the arts of the home and family. Such, when divested of their necessarily crude biological hypotheses, was the ripe wisdom and sagacity of these great physicians, so near us and yet so far away.

THERAPEUTICS.

The remedial therapeutics of the Roman physicians between Celsus and Galen have not, in their fuller details at any rate, the same practical interest for us as their hygienic teaching. We may glance somewhat cursorily at a few of the means. In their eclectic and expectant methods, in the development of physical means of cure, and in some use of wine, we note that influence of Erasistratus and of Asclepiades upon the pneumatico-eclectic schools to which I have repeatedly invited your attention; but it is with less satisfaction that we turn to note the influence of the Herophileans in that increasing use of drugs, and of violent means such as emetics, clysters, purgatives, and venesection, which gave a certain grossness to the therapeutics even of Galen himself, and under his influence degraded medicine more and more till the days of Molière. Herophilus and his followers revered Hippocrates in lip-service, and, indeed, did much to preserve and elucidate his writings; but they never obeyed the spirit of his therapeutics, which were founded upon prognosis and upon respect for the functions of nature.

Asclepiades had, as we remember, carried physical therapeutics to lengths almost, or quite, absurd; as in his swings, succussions, and jolts. Therapeutical gymnastics had been admirably developed from the Hippocratean schools through Diocles and Praxagoras of Cos; but it is to be observed that not only by Asclepiades and Celsus but also before them, indeed from Hippocratean times, and more especially in the Coan than in the Cnidean School, the intemperate pursuit or profession of gymnastics was deprecated, not only as injurious to the health, but also as illiberal (*κακοτεχνία*, Galen). Thus by the more sagacious physicians there was a continual mistrust of the gymnastic schools.[57]

At present, however, I will speak only of the passive movements, of the massage of the period which seems to have been elaborate and refined. By four or six performers the entire body seems, often at any rate, to have been massaged at once; two performers manipulating the arms, hands, and fingers, two the trunk, two the legs and feet. The first stages were slow and gentle, the later became gradually quicker and severer. We may note with interest that gentle massage was practised in fevers, so long as there was no acute focal lesion; the tolerance of the patient of its degrees and durations being carefully watched. The amelioration which by this means they professed to obtain was attributed in part to refrigeration by the induction of sweat. It seems to me, Sir, that in some measure this practice is not unworthy of the consideration of this College. The fever lore of these ancients was, as we all know, enormous; as Wellmann says, and as W. S. H. Jones has exhaustively proved, it was a literature in itself.

And we are all well aware also that the cult of water springs and the bath literature of early times, before as well as after Epidaurus, was no less prodigious.[58] The ancient magic of wells, which developed into the Epidaurian combination of theurgic and therapeutic ritual, had in the times of which we are speaking become a separate resource. The Roman physicians seem to have ignored the Tiber Island. But we read of pure water baths, of saline baths ("which warmed the body"), of oil baths for cramps, pains, and retention of urine, of sand baths, and of sun baths.[59] Asclepiades, and after him the pneumatists, argued against the abuse of warm baths which, however appropriate in their degrees for debilitated persons, were not bracing enough in fevers, or even for use in health. Here we call to mind Musa's reputed cold-water cure of his august patient. Nurses were lectured for "boiling their children"; and bathers were warned against letting water into the ears, "which damages them." Mineral waters, of course, had their many natural virtues. Archigenes gives us the first rational classification of mineral waters which is extant: he divided them into the alkaline (soda), saline, aluminous, sulphurous, ferrous, cuprous, and bituminous; and elaborately explains their effects on the humoral hypothesis.

Wine.—The place of wine as a remedy is a curious story; in my Harveian Oration (1900) I touched upon it, but there especially as regards its outward application, even from the days of the Good Samaritan. Asclepiades wrote an essay *Περὶ οἴνου δόσεως*, an epochmaking work in its way, the contents of which may be gathered from Pliny[60] and Dioscorides,[61] amid paragraphs deriving from such recipe compilations as that of Sextius Niger. As I stated in my lectures of last year, Asclepiades, who was nicknamed "*οἰνοδότης*," taught the therapeutical value of wine, and discussed the virtues of its various kinds—the greek, the roman, and so on; but the advocacy of Athenaeus seems, from negative evidence, as from the lack of certain details in Pliny and Dioscorides, to have been inspired not directly by or from Asclepiades but to have been influenced by the tradition of Diocles, Praxagoras, and Mnesitheos; authors to whom those compilers do not allude. Athenaeus says that wine, when carefully used—used with attention to proper rules of symptoms, of doses, of dilutions, of hours—arouses the pneuma from its torpor, and, as Archigenes repeated afterwards, is especially useful in syncope. Now syncope was then said to consist in a loss of tone (*τόνος*), a vital quality to which the pneumatists attached much importance, and the state of which for the whole body they were wont to infer from the tone of the pulse. From a persistent acceleration of the pulse in fever, for instance, they inferred correctly that the remedy should be withdrawn.

Venesection.—But I need not say that of all the therapeutical means practised and discussed in those days the most ascendant was venesection; and concerning it the controversies of the schools were the most stubborn and acrimonious. In my lectures last year I noted the reserve of Asclepiades in respect of venesection; a means which, for good reasons, he did not withhold, but kept in hand for critical moments. Now the close attention of Athenaeus and the pneumatist school to the pulse gave no little importance to their teaching concerning this remedy. But the protest against the practice of venesection as a potent and a vulgar ally against disease in general carries us back into a much dimmer past. Not to detain you by a long retrospect on the sacredness of the blood—no unfamiliar subject in the Old Testament for instance—I may curtly remind you of this superstition in the semi-Oriental mysticism of Pythagoras; and so onward in medicine it influenced Empedocles and the Sicilian School, Philistion of Locroi, the Cnidians, and Chrysippus. If we may rely upon certain passages in the eleventh book of Galen (150, 197, and 252), Chrysippus stood prominently forth as an opponent of bleeding, and his deprecation was heeded more especially, so it was said, by one Medius, an uncle of Erasistratus, and by Erasistratus himself and his disciples. This forbearance was a little more remarkable in that the Erasistrateans, and indeed Chrysippus himself, clearly perceived the perils of plethora, but these they combated by diet. The objection to bleeding was formulated as an opening for the escape of the animal spirit (*πνεῦμα ζωτικόν*). Apollonius, a pneumatist of whom we know little, although indisposed to bleeding as a routine, contributed the interesting demur, that in plethora the permeation of the periphery by the *πνεῦμα φυσικὸν* was retarded. As reasonable persons, therefore, they accepted no formula but, before using the remedy, estimated the general conditions of the malady, the state of the patient as to strength and nutrition and so forth, and especially as to age and sex. Archigenes, however, advised that bleeding in some form was not inappropriate in plethora; and many of the school believed at least that by this means foul humours could be evacuated.[62] In fevers, however, they had

[57] On this subject the reader is referred to the admirable study by Juthner of Philostratos Ueber Gymnastik, Leipzig, 1909. (Philostratus lived soon after Galen.)

[58] The Alexandrian Greeks owed but little to the Pharaonic Egyptians, who were, however, as we gather from Herodotus (I. 193, 198, and II. 35-37), at least hygienists. They had a State health service, and practised many ablutions of person and clothing, as did the Babylonians also. The honour of filth in person and clothing was left for medieval times. The Egyptians also vigilantly and ceremoniously protected their water courses.

[59] The reader who desires to know more of this history may be referred to the Second Book of Oribasius, chiefly compiled from the works of the distinguished pneumatist physician Herodotus, pupil of Agathinus.

[60] N. H., xxiii., 31.

[61] V. 7.

[62] It is interesting to note that in almost all schools of ancient medicine melancholia was attributed to toxic causes.

no doubt that to reduce diet, and at the same time to draw blood, was to exhaust the patient;[63] therefore, to prevent the inflammatory indraught of blood into the arteries in fever the master, after the Alexandrian tradition, bandaged the patient's limbs so as to keep the synastomoses closed, and thus to prevent the conflagration of blood and pneuma in the thorax. For we have seen that Erasistratus, to account for blood in the arteries, assumed certain more or less distal communications between the veins and the arteries, gates normally guarded or closed. On account of this meticulous shunning of venesection, though they limited rather than repudiated it, Galen waxed almost as hot against the pneumatists as against the methodists; but Celsus (52, 3) in his cool and shrewd way had said long before—in reference to Asclepiades, "*Sanguinem incisa vena mitti novum non est, sed nullum paene morbum esse in quo non mittatur, novum est.*" The pneumatists, or Erasistrateans, reasonably argued that in many cases local ought to be preferred to general bleeding, as by cupping, scarification, or leeches; and that in many cases even dry cupping or a cataplasm would suffice to draw off a congestion.[64]

EMINENT PNEUMATIST PHYSICIANS.

After this discussion of pneumatic doctrines, modified or masked, generation after generation from Alexandrian times onwards, by empirical, sceptical, stoical, and eclectic tendencies, and even by changes of name, and at length formulated for Medicine by Athenaeus in Rome, I propose to return, so far as the fragments will permit me, to the personal story. Of Agathus, and after him of Agathinus the Spartan, who lived in Rome under the Flavian Caesars, and were important links in the chain between Athenaeus and Archigenes, we know little; but it would appear that both of these physicians played a considerable part in the fusion of doctrines to which I have often referred, a fusion which made the name rather than the essential doctrine of the pneumatist short-lived. Greenhill regarded Agathinus as taking the lead in these eclectic or "episynthetic"[65] modifications: "Εκλεξάμενος τὰ αρέσαντα ἐξ ἑκάστης τῶν αιρέσεων." Archigenes, who a pupil of Agathinus, said of his master that he was accurate in all things, and ripe in experience. Still guided by three main clews of pneumatist doctrine—namely, the pulse lore, the fever lore, and the hygienic, pædagogic, and dietetic forms of therapeutics—we perceive at this period more explicitly the fusion of Pneumatism, Methodism, and Empiricism, with a younger and more liberal Hippocratic, or clinical, medicine.[66] This blend of old and new suggests to us progress, an orderly development of medicine; and we shall see presently that a solid, sagacious, clinical school, variegated indeed by some sectional dissent, survived, and superseded the arrogant dominatio n and the sterile maxims of the later methodists, such as Thessalus. And yet we must admit that on the dogmatic or clinical side this evidence of sound development was accompanied not merely with a respectful appreciation of older doctrine, but with a mechanical tradition of form and letter such as seems to us to be contrary to the spontaneity of life. For although we are wont to suppose that the medicine of summists, of copyists, of large and literal transcripts, belonged to Byzantinism, and signified then the routine, if not of decrepitude at least of an unintelligent conservatism, yet we have seen that the era of scribes and summists must be carried back much farther than we had supposed, to a period not only far before Oribasius and Aetius but before Varro. And plagiarism was not confined to the scribes; even men of natural genius, such as Soranus and Galen, excerpted largely, literally, and anonymously; so did that imposing surgical phantom, Antyllus; and so, says Wellmann, did that no less considerable surgeon Heliodorus whom, on the slender relics that remain, I am disposed to regard as of still richer genius. In discussing, then, all these romano-hellenist medical writings, we must bear in mind the custom among them of lifting both terms and volumes of the literature one from another; and this without acknowledgment, unless when, happily for us—as often in Galen—controversial animosity goaded to personal attacks. That Celsus named his sources so generously may in the enemy's mouth be one more point of evidence that he was a layman! In the fragmentary and disconnected state of the records of the period then we cannot be sure whither, and how, many of these embedded remains are in their origin and order to be distributed. Any such distribution which, with the aid of far greater scholars than myself, I may now attempt, in order to distinguish individual authors, must therefore partake of much uncertainty, and be in its nature provisional; but in justice to the memory of Archigenes it must be attempted.

Archigenes and Aretaeus.—To appreciate Archigenes, one of the greatest of the physicians of this period, we must first discuss the place of Aretaeus, who, by name at least, is familiar to us all. And probably not a few of us, attracted by the story of the past, have perused, or at any rate dipped into, his treatise, so admirably rendered for English readers by Adams, and have been deeply impressed by his gallery of diseases—portraits select, succinct, deft in their handling, and speaking of character and experience. Galen, more diffused in generalities, never painted such telling pictures of morbid species. From it we have formed, and justly formed, a high opinion of the medicine of the age. This impression I say was just; but that Aretaeus in person justly deserved the honour is another matter. The ancients gave him no such meed. The author, who drops systematic pneumatism in his practice, which is on sound Hippocratic lines and probably moulded in some part upon Asclepiades, and interprets pneuma merely as *φύσις* in the Hippocratean sense of *δύναμις ζωτική*, or generative energy, yet by phrases here and there, such as his emphasis on *τόνος*, betrays his school. He seems to have lived under Domitian or Hadrian, but to have fallen into a long neglect. The first mention we have of him is in the sixth century by Aetius; then by Paul in the seventh; after then he sank once more into oblivion till the middle of the sixteenth, when the Greek MS. of a large part of his work was discovered, and was printed in Paris in 1554. It was now observed that the treatise was written in Ionic Greek; now the Ionic singsong in his day had become a literary fancy, and to use it in medicine was an affectation, even—so competent scholars assure us—an affectation so "grotesque" as to strengthen some suspicions of the writer's originality in other respects. Was the neglect of Aretaeus by the ancients because they knew him to be but a secondhand and archaistic scribe? It does seem probable that in Aretaeus the Cappadocian, who so far as we know never visited Rome, we find a conspicuous example of that prevalence of copying and recopying without acknowledgment which, not unknown among ourselves, then prevailed in the large measures I have indicated.[67] Delicate and complicated as is the task of tracing such stolen property from one obscure author to another, yet as out of it comes to light the figure of Archigenes of Apamea, of the time of Trajan, who, like Asclepiades, seems to have suffered unmerited eclipse, we must try, if on main lines only and by renouncing some of those impressions of form which we call the higher criticism, to make clear in summary[68] certain restorations and redistributions suggested by modern students concerning these records.

Of the confessed compilers Oribasius, who lived during the last three-quarters of the fourth century, was the chief; and of his collection about one-third is extant. The chapters on the poison literature are lost. We know, honest man, from his own references, that he swept into his net Dioscorides, Archigenes, Antyllus, Philumenus, Philagrius, Poseidonius, and Galen. About a hundred years later flourished another such scribe, namely, Aetius, and in his collection lies our main source of the poison literature, after Pliny. But Aetius, luckily, did not copy from quite the same sources,

[63] In more than one passage of Galen's XIth Book. See also Book X. 376.

[64] Which vein to open in a particular case or malady, in the elbow, in the ankle, in the temple, at the nasal angle, in the tongue, in the little or ring finger, and, not least, on which side of the body, was in the times of which we are speaking, and still more in the Middle Ages, often decided on fantastic reasons. Arteriotomy was practised occasionally by the ancients, but under what conditions is not precisely known.

[65] Not, of course, the philosophical school so-called.

[66] We may observe in the Pneumatist succession the continuous use of Methodist technical words, such, e.g., as *ἔνστασις*, a stoppage of the pores.

[67] We do not, of course, estimate these annexations by modern ethical standards. In ancient times written matter when published became the common property of the reading public, "*δεδημοσιώμενα τὸν καταβέβληται.*"

[68] In this summary I rely on Wellmann's Pneumatists, and on his article in Hermes, 1908; also on Daremberg's edition of Oribasius, and of Rufus.

nor quite the same things, as Oribasius; he borrowed from Asclepiades, and, so far as extant MSS. inform us, he made a larger use than did Oribasius of Philumenus. Now, who was *Philumenus*? Well, he too was an eclectic methodist and pneumatist of the generation of Galen (about 180 A.D.), and likewise a compiler after the spacious manner of Oribasius; but only some portions of his work, those contained in Aetius and Paul of Aegina, were known until Wellmann's discovery, in the Vatican, of 37 short chapters of his work, most fortunately with the names of the authors submitted to his scissors.[69] Philumenus again gathered his materials from somewhat different sources; so that these three compilers throw cross lights upon each other and upon their various sources, so that by comparing them certain identifications begin to appear. Philumenus has this particular value for us, that Archigenes seems to have been one of his principal sources. This inference first suggested itself to Wellmann while reading a certain chapter containing an antidote to viper venom, which he recognised as the antidote of Archigenes. Now Aetius, in all the diseases concerned, while similar to Aretaeus, is fuller, and presents also some peculiar differences; for instance, in respect of pleuro-pneumonia and empyema Aretaeus does not extend beyond Soranus. And in respect of headaches and of epilepsy the identification can be carried farther; for herein Soranus, and even Galen, and much later Alexander of Tralles, as well as Aretaeus, followed Archigenes. Not to detain you on points of cumulative evidence, I may say that in the divisions of matter, in the way in which certain drugs are selected and used, and so on, there are further coincidences which are very significant. The conclusion seems to be then, that Aretaeus was a copyist, as was Aetius; that they copied from some source common to both, and that this source was Archigenes, whom indeed Aetius happens to name. Wellmann, comparing them in parallel passages, declares that Aretaeus is just a servile copy of Archigenes, if not directly, then by the intermediacy of Philumenus; and this may be. But I would remind you that there is much verbal identity with other authors in Galen also; and if I may venture to demur to a judgment of this distinguished scholar it would be that the agreement in many such passages is substantial rather than literal; and in a broader sense I would urge that similarity of terms, and even of phrases—"literary universalities"—does not necessarily convict an author of plagiary. Phrases which become current in one period fall out of another. In the medical journals of to-day we may readily note the professional dialect and shibboleths of our own time, especially in the writings of the less literary of our brethren. And thus, under the Roman Empire, although, for instance, Aetius did not copy Oribasius, yet in many places there is much similarity between them and no little verbal identity. Nevertheless, it seems more than probable that, whether through Philumenus or not, Archigenes was the main source of Aretaeus; and that Philumenus, who reproduced Archigenes, was in his turn the main source of Aetius and no inconsiderable source of Oribasius.

However, there is yet one more of these compilers to whom, if you will forgive me, I must refer—namely, one *Alexander*, of whom I, at any rate, know nothing except the remarkable treatise, easy to lay hands upon, which stands first in Ideler's Collection. It consists of two sections, one on Problems and one on Fevers; and with this it is that we are now more particularly concerned. For this fever chapter is in close conformity, often in verbal identity, with Galen's writings on fever, the pathology of which, with some qualifications of his own, he drew from pneumatist sources. Now in both Galen and in Alexander we find fever divided into two categories, thus: (1) as to severity, the πυρετοὶ μέγαλοι καὶ μικροί; (2) as related to the three kinds of bodily substance respectively—the dense, the moist, and the vaporous[70]—that is to say, quotidian, septic, and hectic. But on turning to the same passages in Alexander we find a third category—as to "rhythm"; namely, slow, quick, intermittent, and continuous; though it is added that as the motions of heat are infinite so these rhythms glide the one into the other. And, in respect to those kinds of bodily substance, he goes on to say that the harder its constitutional substance the less is the body swayed by the fever, and the less the sympathetic propagation of its motions through the system: thus a quotidian is brief because it vibrates only in the rarest substance of the body. Now this additional matter Alexander must have got from the large work of Archigenes, mentioned by Galen, Περὶ τῆς τῶν πυρετῶν σημειώσεως, from which he had made a somewhat larger excerpt than had the others from the common source to which they all betook themselves. Now fortunately, Galen (VIII. 203) gives the title of an important pathological work of Archigenes; and Oribasius (II. 146) that of his work on therapeutics—namely, Τῶν ὀξέων καὶ χρονίων παθογνωμικά; and Θεραπεία τῶν ὀξέων καὶ χρονίων παθῶν, respectively; both apparently in four books; and these titles, as we shall remember, correspond to the four books of Aretaeus On the Symptoms and On Treatment of Acute Diseases, and On the Symptoms and On the Treatment of Chronic Diseases.

Now we have the titles of two others of the more celebrated treatises by Archigenes—namely, the Περὶ τῶν κατὰ γένος φαρμάκων and the Περὶ τοπων πεπονθοτών, (in three books) to which Galen gives high praise. The work on the seats of disease would have been an invaluable document for the historian. We are told that in it Archigenes, with a genuine clinical instinct, inquires if from a comparison of the varieties of functional perturbation, or symptom groups, seats of disease could be inferred; if there be, that is, a signal group for each seat? For example, if we observe this series—orthopnœa, rusty or dark and livid or frothy sputum, fever, pain in the side, and a rapid pulse—we infer a peripneumony. Dyspnœa is common to many maladies, it is true, but we interpret it by its associates; as in this case by fever, the kind of sputum, and so on. Galen (De locis affectis) scoffs at a narrower argument of his, that the seats of disease might be discerned even by several kinds of pain; apparently it did partake too much of the nature of a logical exercise, for Galen complains of its newfangled notions and terms; but nevertheless the method was a sound one. Moreover, upon it Archigenes seems to have built another fruitful clinical idea, that of sympathetic parts, and primary and secondary symptoms. Thus he pointed out how disease in a certain part might betray itself by pain or disorder in a distant part, not itself diseased. He instances, and very appropriately, confusion of vision caused by a disorder seated in the stomach. These views, and the seat of the hegemonic pneuma in the heart, Galen contested; though on the whole treating his great predecessor with respect, and paying him the dubious compliment of copying from him extensively, often without acknowledgment. For example, Galen's description of that notorious disorder the πνιξ ὑστερική—the hysterical suffocation, is identical with that of Aetius, as are both with that of Philumenus the plagiarist or copyist of Archigenes.[71] This description was that the restless uterus attacked the heart through the arteries, the liver through the veins, and the brain through the nerves: the simulation of death was described; and the cause was attributed to a chill to the pneuma, a pathology opposed to the more rational notion, of Soranus, of an inflammation of the womb, which engendered in the cavity a cold and moist phlegm; in quantity no doubt small, but, as he urges, how minute may be the venom of a snake or of a mad dog. Now, in commenting upon this account in Aetius, Valentine Rose proved, by facts with which I will not trouble you, that Aetius did not copy from Galen, but, as we have seen already, from Archigenes, the common source of both writers.

On other subjects, as concerning the cynanches, for instance,[72] and certain drugs and their uses, a like correspondence is notable, but I will touch on two more coincidences only—namely concerning elephantiasis and concerning the hellebores used in the treatment of it.

[69] This discovery was one of the many fruits of the formation of the preliminary catalogue for the Corpus by the associated academies. Unfortunately, a vast pile of MSS. thus revised and catalogued has brought in little so far; such matter as 150 indifferent MSS. of the Aphorisms; 100 of the Prognostics, and so on, with quantities of Arabian, Syrian, and Hebrew translations. So it may prove that for Galen we shall have little better than the Ed. Pr., or for Paul than the Aldine. And Aetius is complete only in the Latin version of Cornarius. There was a sad loss of MSS. in the fury of early printing. (See VIth vol. of Pauly-Wissowa; art. on Dioscorides).

[70] στερεὰ, ὑγρὰ, and ἀερώδης οὐσια.

[71] We may conveniently regard Galen's works as consisting in part of his own original observations and thought; in part of fugitive pieces concerned with the questions of the day; in part of compilations.

[72] Vide, e.g., Die Halskrankheiten bei d. altgriechischen u. römischen Aerzten, von J. Weigel, Leipzig, 1907.

Elephantiasis was so hideous, so alarming, and so conspicuous a disease that, if prevalent, it could not escape observation. We may recognise this horror in its various names, such as leontiasis and satyriasis. On the evidence of silence then we may assume that elephantiasis did not appear in Italy until about the time of Themison and Celsus. The first description of the disease, so far as we know, was written in the third century B.C. by Straton, a description handed down to Themison through his master Asclepiades. Of this disease and of its treatment Aretaeus gives a full report;[73] and Wellmann, comparing it passage by passage with that of Archigenes as preserved in Aetius, points out that in this chapter again Aretaeus was a plagiarist of Archigenes. The treatment of the disease was also identical in both—namely, venesection at the elbow, hiera, hellebore, whey, viper preparations; and—externally for the tubercles, the unguent was similar.

The hellebores were in occasional use by physicians in more ancient times. Herophilus, on whose bent for pharmacy I have already insisted, seems to have pushed this use of the drugs in some opposition to Erasistratus; and under Themison, Archigenes, Rufus, and others they came into the common use which is familiar to all classical scholars. Anticyra, Sicily, and Galatia produced the best kinds. Hellebore was used chiefly perhaps for melancholia (which, as I have said, was generally, or always, regarded by the ancients as a toxic disorder), for other insanities, and for pains in the head. Now Aretaeus further appropriates from Archigenes full directions for the use of the herbs; the white hellebore to act especially upon the upper bowel, the black on the lower; and if a prompter action were required the herbs were to be cut very fine. They were used also as urgent emetics. In spite of the prudence of Asclepiades in therapeutics—a prudence and reserve I dwelt upon last year—and the large development of the physical methods of treatment, yet under methodists and pneumatists alike reckless attacks upon disease by powerful drugs prevailed more and more; and unhappily the influence of Galen did little to discountenance them. Emetics were used by the Hippocrateans more rationally, and in moderation by Asclepiades and Celsus also, who advised them in bilious constitutions, and for certain chronic diseases. Asclepiades indeed gave warning that abuse of emetics led to loss of appetite, atony of the stomach, indigestion, and emaciation. Nevertheless, vomitives obtained their vogue under the Empire, and as an instrument of gluttony, became almost habitual. These agents were many in number, ranging from a feather in the pharynx to a pound or a pound and a half of radishes in a horrible mixture with honey, salt, and vinegar; the oxymel of squills being another mawkish alternative.

While referring to the use of hellebore in insanity I may mention not inappropriately that on the treatment of this class of disorders Archigenes seems to have held opinions of remarkable enlightenment. Seeing the priests of Cybele scampering, and flagellating, and cutting themselves after their manner, he said "they are insane, do not leave them to these bloody gods of the East, send them to me." And his therapeutics was no less enlightened, for he fed up the maniac and soothed him with music. What would Bedlam have thought of this eccentricity!

Archigenes, as reproduced by Aretaeus, had a considerable knowledge of the veins and ducts of the liver, and wrote well on phthisis, and on diabetes which was regarded as a melting down of the flesh into urine—a sort of runaway dropsy. And of the anatomy and diseases of the nervous system his knowledge was considerable; for instance, he seems to have been the first to show that hemiplegia falls upon the side opposite to that of the cerebral lesion; and moreover to attach the aura to epilepsy. In his description of tetanus Haeser thinks a note of cerebro-spinal meningitis is to be detected. He recognised also the glandular nature of the kidneys, of the testicles, and of the mammæ. One remark of Archigenes might, after the lapse of all the centuries, come as a fresh light to the modern examiner. "What we need is to be fertile in expedients, not to be always paying attention to the writings of other people."[74]

The surgery of Archigenes, whose fame, says Dr. Withington, was no less honourable as a surgeon than as a physician, and that of other Eclectic physicians of this period, presents a very fair story. The ancient Greeks shrank from mutilation; and amputation, mentioned by the Hippocratean physicians only in gangrene, as a subsidiary aid, seems, even in Alexandria, to have made no great progress; for Celsus also regarded it as a last sad resource in gangrene; yet by the time of Trajan, under Archigenes, amputation had become a recognised procedure for ulcers, growths, injuries, and even for deformities. The limb to be removed was bandaged, and a tourniquet was placed above the line of severance; or sometimes the chief blood-vessels were first cut down upon and tied, and the smaller tied, or twisted, during the operation,[75]—"transfixing them with a sharp hook and twisting them round and round and closing them by this twisting"—a proceeding of which there is no trace in Hippocrates, nor apparently in the earlier Alexandria. These good methods were afterwards obliterated by the bad fashion of the searing iron. But we know that Galen used the ligatures, and where the shop was at which he bought them. Moreover, as we noted under Soranus, the whole field of surgery had come under a more intensive cultivation. Still, if it be true that in Alexandria capital operations had not made much way, yet by the traditions of Apollonius of Kition, of Lysimachus of Cos and other Hippocratean commentators, of Apollonius Mys (a Herophilist from Alexandria), of Dioscorides, and especially of Philoxenus, we learn that nevertheless in that anatomical school surgery was carried actively forward; for instance, in cutting for stone and operating for hernia, operations which, before and after the prey of specialists and adventurers, seem then for a while to have been undertaken by the general surgeon; and by Heliodorus resection of the long bones was performed. How much of the more advanced surgery under the Empire was due to Romano-Greek physicians, as, for example, to Heliodorus and to that tantalising shade, without local habitation, Antyllus—a personage who probably owed much to Heliodorus but of whom we have little more than a glimpse in Oribasius—and how much of it flowed derivatively from earlier sources we cannot definitely say; but the progress seems to have been substantial and largely original.

Out of such fragmentary and allusive records as I have tried to stitch together, recent historians of medicine, and Wellmann especially, have endeavoured to reconstruct the figure of the great eclectic pneumatist, of methodist origin, Archigenes of Apamea; a figure not wholly eclipsed in the transit of Galen, for in the sixth century his memory is still revered by Alexander of Tralles as *θειότατος εἴπερ ἄλλος*. That Juvenal speaks of him as a fashionable practitioner need not derogate from his merits, as we pleaded in the life of his greater predecessor Asclepiades, and as we might have to plead for fashionable physicians of our own day, who, wise men as they are, do not disdain empirical and persuasive remedies when no arm of precision is at hand. Archigenes seems in character to have been a blend not only of several schools of doctrine but also of several complementary qualities: of theorising proclivity, yet rational in methods and technically sound in practice. To his clinical insight the fruitful distinction between primary and secondary disorders, and the indication of localising symptoms, which I have quoted from Aetius, is strong testimony. If, on the one hand, it appears from Galen's respectful criticism, and from other witness, that, after the fashion of the pneumatists, he was in preciosity of language and in sophistical dialectic something of a pedant, yet, on the other hand, he did much to deliver medicine from the cramping influence of the methodist common forms based upon an abstract principle, like the "homœopathic" formula which in our own day became for a while so dear to that most theoretical of creatures the "practical" man. Nay, if besides he seems to have fallen in with the use of amulets and such like, probably it was as a tolerant and humorous observer of the foibles of mankind, and of the magical influences of faith, rather than as a charlatan or a sorcerer.

I have said that to enter upon the poison literature would in this course be impossible, for in its biological and pharmaceutical aspects it would require a lecture for itself alone.

[73] It is a curious feature in Aretaeus (Ed. Adams, p. 123) that he describes at length the elephant from which the disease took its name. Why? As a transcriber? Oppian gives this same description, one copied, it is said, by both writers from Amyntianus' *Περὶ ἐλεφάντων*; a book I find (in Smith's Dict.) is referred to by a scholiast on Pindar.

[74] "*χρὴ δὲ καὶ αὐτόν τινα συνεπορέειν, μὴ πάντα ἀλλοτρίῃ ξυγγραφίῃ προσέχοντα τὸν νόον.*"

[75] Vide Daremberg and Bussemaker's edition of Oribasius, excerpts from Heliodorus' great *Χειρουργούμενα* in five books; and notably the passage "*περιστρέψαντες πολλάκις καὶ ἀποτυφλώσαντες ἀντὶ διὰ τῆς περιστροφῆς.*"—Lib. L. c. 4.

Such a chapter may be added to these lectures hereafter; but in conclusion I would indicate the place of Archigenes in this current of medical history. We have seen that Philumenus, in his Περὶ τῶν ἰοβόλων ζώων καὶ τῶν ἐν αὐτοῖς βοηθημάτων, drew largely upon him, as he did upon less eminent men of the school of Athenaeus and Soranus; and this not least in respect of poisons and their antidotes. Our tradition of the poison literature, more or less mingled in its course with that of cosmetics, begins with one Apollodorus of Alexandria (*c.* 300 B.C.); and thence in dark volume it flowed through Nicander, Philinus, Andreas, and that remarkable man, a Herophilean turned empiric—Herakleides of Tarentum. Krateuas, who seems to have worked under the patronage of Mithridates Eupator, is a very important link of this chain.[76] It is with Krateuas that we enter upon the Attalid and Mithridatic period of this art and mystery, on which the *locus classicus* is the twenty-fifth chapter of Pliny's Natural History; and so to Dioscorides, to Philumenus, to Aetius who borrowed from Philumenus, and to Galen. Thus at second hand Archigenes became a main source of this sinister lore for the Middle Ages, and for the papal and ducal circles of the Renaissance.

In these lectures, Sir, if I have failed, and with but our present resources we may hardly succeed, to bring the physicians of Rome out of chronological tables and to present them in living portraiture; yet if in any subordinate degree I have made some fair endeavour to illustrate the inner movements, and to read the genius of those variously gifted races of whom Roman Medicine was engendered—the dreamy Sicilian, the positive and sagacious Greek, the subtle and daemonic Oriental which, blended in Alexandria, inspired the motley players who walked the stage of our art and mystery at the feet of the imperious mistress of the world; if in any fair measure I have done this my labour and your long suffering, for which I gratefully thank you, may have been not wholly in vain.

A CASE OF MULTIPLE MYELOMA,

WITH SOME OBSERVATIONS ON THE NATURE OF THE "BENCE JONES" PROTEIN FOUND IN THE URINE.

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With a Pathological Report on this and Another Case

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THE rarity of the condition in which multiple myelomata are associated with the peculiar protein in the urine described by Bence Jones[1] merits the publication of any cases which may be observed. A summary of the cases which had been recorded up to 1905 was given by Moffatt[2] in that year. In the case described below, which is a striking example of the disease, an attempt was made to elucidate the nature of the Bence Jones protein; and it was found that the protein in the urine, while giving the characteristic tests from day to day, varied at times in its composition. This would tend to show that the different opinions recorded by various observers may be due to the fact that the bodies found in the urine are derivatives of one common body, which derivatives may be present in varying quantities from time to time, not only in different cases, but even, as in this one, in the same case. The pathological report appended shows also that the different pathological findings of various workers are more apparent than real.

CASE 1.—The patient, a collier, aged 30 years, had always been a healthy man, and had had no illnesses previous to this one. He worked in the mine until Jan. 10th, 1910. When first seen on Jan. 11th he stated that he had not been feeling well all the winter. He had felt weak, having occasionally had pains in his chest and between his shoulders at various times during that period. When first seen he complained of weakness and of a very poor appetite. Mr. Evans, who had known the man for some time, found that he had wasted very considerably. Over the right fifth rib on the inner side of the nipple line there was a prominence, but no thickening of the rib could be felt. The tongue was thickly coated, and there was marked constipation. The urine gave a precipitate on warming which was not dissolved by the addition of acetic acid. During the next 12 days the patient became weaker, there was marked anorexia, and no change was observed in the chest. On Jan. 22nd Mr. Evans and Mr. C. E. Morris of Holywell examined the case together; a careful examination was made, and the whole of the spine was carefully investigated. There was no kyphosis or scoliosis, and nothing could be found to explain the protrusion on the rib. He was still unable to take food, and the tongue was very dirty.

On Feb. 8th some rigidity in the upper dorsal spinal region was observed, and the patient was too weak to get out of bed. On the 9th he was emaciated, sallow, and appeared very ill. The expression was anxious. The skin was loose and inelastic; the muscles were all soft. The mucous membranes were pale. There was no cyanosis, œdema, or jaundice. He was lying on his back with his head thrown back nearly as much as is shown in the photograph which was taken 18 days later. (Fig. 2.) The thorax, apart from the prominence over the fifth rib, was of normal conformation and moved freely. Apart from a few râles at both bases, no abnormal physical signs were detected in the chest. The abdomen was flat and moved normally, but the right rectus was quite rigid from the costal margin to the umbilicus. The heart was normal and the blood pressure was 130 mm. Hg.

There was no pigmentation of the skin or mucous membranes, and no enlarged glands could be felt in the neck, axilla, or groin. The tongue was coated with a thick brown fur. The bowels were constipated and some fæces could be felt in the sigmoid. Examination of the blood showed nothing abnormal. An examination of the motor system showed weakness of all the muscles, equal on the two sides. The small muscles of both hands seemed more wasted than the other muscles, the wasting of the thenar and hypothenar eminences being most marked. As he had been at work as a miner to within a few weeks of this examination this wasting was looked upon as being of special significance. The sensations of touch, temperature, and pain were normal over the whole body. The retinal fields were normal. The knee-jerks on both sides were exaggerated, more particularly the left. The ankle-jerk was obtained on the left side, but not on the right. The left plantar reflex was of the extensor type, though not slow; the right was flexor. Wrist, triceps, and jaw jerks were not obtained. The cranial nerves were normal. Standing up with assistance, he held his neck quite rigidly, the head being thrown slightly backwards. There was no scoliosis. The above signs were explained by the findings in the upper spinal region. The spinous ligaments between the last cervical and first dorsal, and between the latter and second dorsal vertebræ, were far less resistant than in any other part of the spine, and pressure over this region caused pain which was local, and not referred to any other part. Careful examination showed no area of anæsthesia over the area supplied by the lower cervical and upper dorsal segments of the cord. The urine of this day showed the characteristic reactions mentioned later, and a diagnosis of multiple myeloma with Bence Jones protein in the urine was made.

On Feb. 12th, on examining the ribs the first on the right side and the second and third on the left side fractured, and crepitus was afterwards observable. On the 18th the sternum fractured spontaneously just below the manubrio-gladiolar junction, giving rise to marked deformity as shown in Fig. 1. On palpation in the second left intercostal space a well-marked thrill was felt, and a loud murmur could be heard on holding the ear near the chest wall, due presumably to the pressure on the pulmonary artery, neither thrill nor murmur being conducted into the neck. The pulsation of the great vessels could be easily felt through the chest wall. The urine passed on this day was quite milky in appearance. On the 19th the left sterno-clavicular joint was disorganised, the ligaments being apparently loosened, and the inner end of the clavicle could be

[76] Vide Krateuas, von M. Wellmann, Berlin, 1897.

[1] Philosophical Transactions of the Royal Society, 1848.

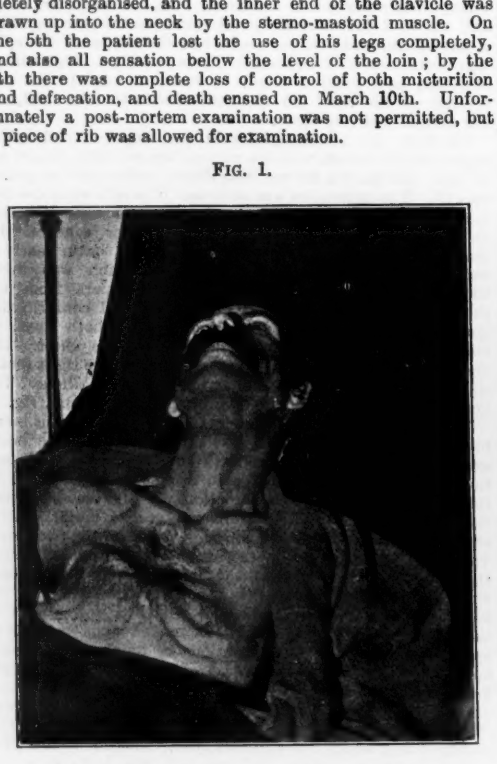
[2] THE LANCET, Jan. 28th, 1905.

easily moved in a circle of about an inch radius. On this date Dr. T. R. Bradshaw, who had had the unique experience of seeing five of these cases, saw the case with us, and he stated that clinically it conformed in every detail with the other cases which he had seen.

On Feb. 27th the patient was in much the same general condition, except that the appetite was much improved, but by this time the first, second, and third ribs on both sides were very markedly altered. They were soft and easily gave way before pressure. The photographs illustrating the condition were taken on this date. (Figs. 1 and 2.)

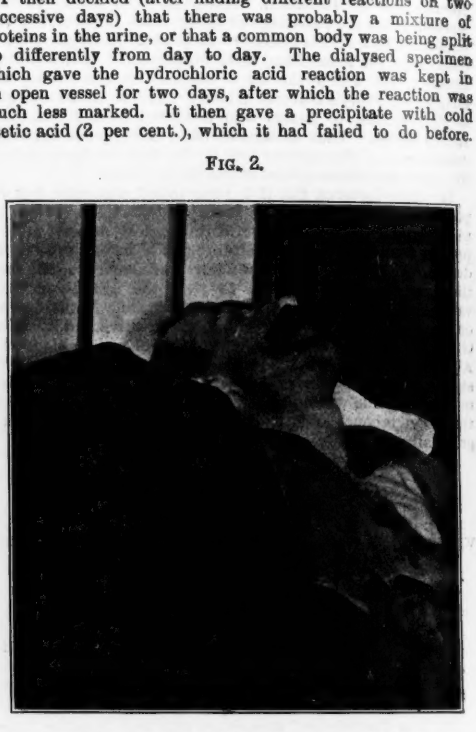
On March 1st the left sterno-clavicular joint was completely disorganised, and the inner end of the clavicle was drawn up into the neck by the sterno-mastoid muscle. On the 5th the patient lost the use of his legs completely, and also all sensation below the level of the loin; by the 7th there was complete loss of control of both micturition and defæcation, and death ensued on March 10th. Unfortunately a post-mortem examination was not permitted, but a piece of rib was allowed for examination.

FIG. 1.



Showing sinking in of sternum with alterations in the ribs.

FIG. 2.



Showing position in which head was constantly held.

The Urine.

On Feb. 11th the urine gave the specific reactions of the Bence Jones protein. On warming after the addition of acetic acid there developed at 52° C. a milky, then heavy precipitate, which disappeared almost completely at 95° C. The acetic acid gave no precipitate in the cold. On adding nitric acid a heavy precipitate formed which was soluble on warming and reappeared on cooling. This could be repeated several times. Repeatedly saturated with ammonium sulphate and well washed with the same fluid the precipitate, which dissolved in either dilute sodium chloride or water, gave the biuret test. It gave the test for loosely combined sulphur, and the potassium ferrocyanide and acetic acid test. The hydrochloric acid test (Bradshaw's test) was negative. The dialysed urine gave the same reactions. For the first few days the urine was passed quite clear, but later it became turbid and then milky.

The nature of this protein has given rise to a great deal of controversy. Bradshaw, as the result of examination of the urine of ten cases, states that it is an albumose. Magnus Levy, who isolated the protein and obtained it in a crystalline form, states that it is nearly related to a genuine albumin. Cohnheim considers it a coagulated albumin. Lindeman concludes that, while it cannot without objections be put in any group of proteins, it is nearest the true albumins.

In the various cases recorded the properties of the substance found have differed so much that either they were different bodies or were not tested pure.[3] That the proteins found can differ even from day to day is shown by the fact that the second specimen examined from the case under consideration (on Feb. 13th) gave a well-marked precipitate with cold acetic acid. A specimen of this precipitate was obtained from 500 cubic centimetres of urine, purified, and found to contain a carbohydrate radicle and no phosphorus; it therefore being a mucin. The reactions varied slightly from time to time, though on most days the nitric-acid test, coagulation temperature, loose sulphur, and "salting out" tests were quite typical. On Feb. 19th a dialysed specimen gave the hydrochloric-acid reaction quite typically, and no precipitate with acetic acid in the cold.

I then decided (after finding different reactions on two successive days) that there was probably a mixture of proteins in the urine, or that a common body was being split up differently from day to day. The dialysed specimen which gave the hydrochloric acid reaction was kept in an open vessel for two days, after which the reaction was much less marked. It then gave a precipitate with cold acetic acid (2 per cent.), which it had failed to do before. This precipitate was phosphorus-free and contained a carbohydrate radicle. The probability was therefore that in this case there was a conjugated protein present, which under certain conditions resolved into other bodies, one of which was a mucin. Mucin and allied compounds belong to the group of glyco-proteins. These proteins occur in the tissues conjugated with chondroitin-sulphuric acid. An attempt was made to separate chondroitin-sulphuric acid from the protein, but none was obtained.

In the accompanying table there are the results of two days' complete analyses of the urine, which were performed with a view of obtaining some indications on which to work. It will be observed that there was an increased excretion of calcium and diminished chloride excretion.

Analysis of Urine in Case of Multiple Myeloma

	Feb. 17th. 1800 c.c.	Feb. 18th. 2100 c.c.
Total nitrogen	13·5 grammes	15·96 grammes.
Urea	27·0 "	23·61 "
Uric acid	2·07 "	0·504 "
Ammonia (as NH_3)	0·252 "	0·336 "
Phosphates (as P_2O_5)	2·16 "	2·31 "
Chlorides (as Cl)	*1·728* "	*1·55* "
Calcium	*0·594* "	*0·714* "
Sulphates (as $BaSO_4$)—		
Organic	0·025 per cent.	0·072 per cent.
Inorganic	0·28 "	0·28 "
Ratio	*1 : 11*	*1 : 160*
Creatinin, Jaffe's test	Present.	Present.

	Feb. 17th.	18th.	22nd.	28th.	Mar. 3rd.
Sulphate ratio	1 : 11	1 : 160	1 : 10	Ethereal	1 : 4 practically nil.

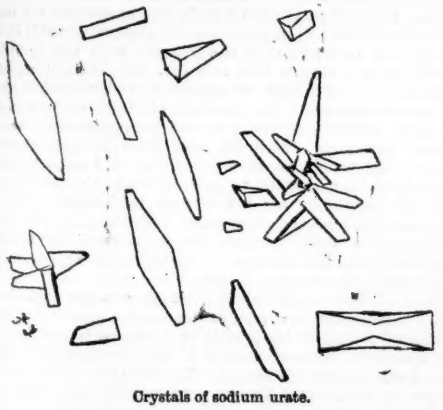
[3] Emerson: Clinical Diagnosis.

The most characteristic feature observed was the marked change in ethereal sulphate excretion, it being normal on the first occasion and markedly diminished on the second. This observation, coupled with the fact that the Bence Jones body contains loosely combined sulphur, suggested that the body might have some relation to the proteins which have recently been isolated from bone containing a high sulphur content. Loebisch, Gies,[4] and others have isolated a substance from tendons which does not differ from true mucins in its properties, and Gies has prepared an identical substance from bones which he calls "osseo-mucoid." It also possesses a high sulphur content and contains likewise a paired sulphuric acid, thus resembling a chondro-mucoid. It is obvious from the history and the photographs that in this case both tendon and bone were being rapidly broken down, and the probability of their derivatives being found in the urine is not unlikely.

The marked variation in the excretion of ethereal sulphates, with a protein in the urine containing loosely combined sulphur, led us to study the relationship between these two conditions, but unfortunately before this could be completed the patient died. On Feb. 18th from 500 cubic centimetres of urine 0·4 gramme of the protein was obtained in a pure condition. It contained 10·5 per cent. of sulphur. On March 2nd 0·3 gramme of protein was obtained, and it contained only 0·55 per cent. of sulphur. The variability in the nature of the protein found is thus obvious. It is of interest to observe that with this change in the nature of the protein there was a variation in the output of ethereal sulphate, on the first occasion there being practically no ethereal sulphates in the urine, and on the second occasion there being an excess. In view of the fact that the case terminated before these observations could be completed, it would be unwise to draw any fixed conclusions, but it is of extreme interest to find that in a disease where the bones and tendons containing chondro-mucoid are being rapidly broken down, proteins of a similar nature—in that they contain a carbohydrate radicle and a high sulphur content—are found in the urine. Two other cases of bone disease which were investigated at the same time revealed the presence of the mucin-like body, but they did not show any of the other reactions.

Another unusual feature in the case was the discovery in the urine of a crystalline form of sodium urate which is

FIG. 3.



Crystals of sodium urate.

shown in Fig. 3. These crystals are of interest in relation to the increased calcium katabolism.

We wish to thank Professor Benjamin Moore for his valuable advice and suggestions; also Miss Tozer for the drawing of the crystals of sodium urate.

Summary.

1. The protein found in this case gave on most occasions the characteristic reactions of the Bence Jones protein.
2. The reactions of the protein varied from time to time.
3. On all occasions when a thorough examination was made the protein yielded a phosphorus-free carbohydrate-containing radicle.
4. The percentage of sulphur in the protein was found to be different on two occasions.
5. This variation was found to be synchronous with an alteration in the output of ethereal sulphuric acid.
6. A possible explanation of these findings is that the chondro-mucins of the bones and tendons are broken down in different degree at various stages of the disease.

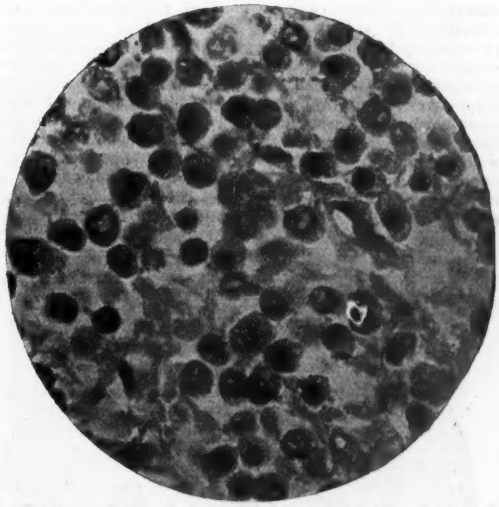
[4] Mann: Chemistry of the Proteids, 1906, p. 41.

Report by Dr. Ernest Glynn.

A piece of rib 2 inches long containing a myelomatous tumour was fixed in alcohol, and portions which did not require decalcification were cut in paraffin and stained in hæmatoxylin and eosin, Unna's polychrome methylene blue decolourised with glycerin-ether mixture, and in Pappenheim's pyronin-methyl-green.

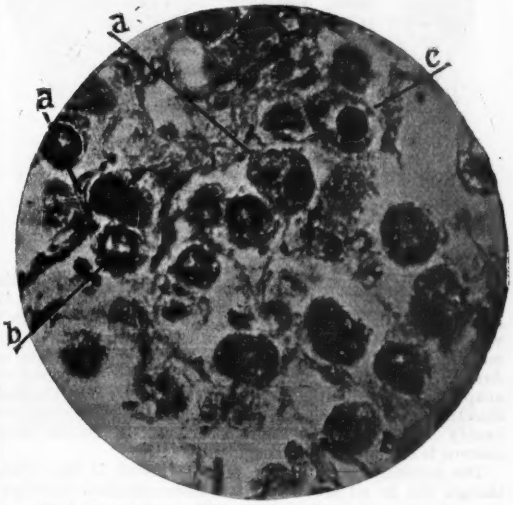
The tumour was composed of masses of cells, some of which were almost round, but the majority oval or even pyriform. (Figs. 4 and 5.) The cells varied in size; the

FIG. 4.



Section of myeloma, Case 1, × 600, showing cells of plasmacytic type—i.e., oval or pyriform cells with eccentric nuclei. Note also delicate stroma.

FIG. 5.



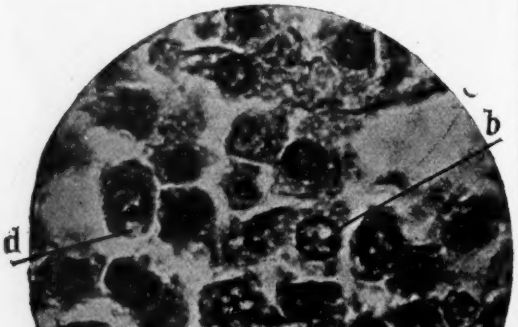
Case 1, same section × 1200. Note in addition to ragged cytoplasm (granuloplasm) and the delicate stroma—*a*, eccentric nuclei; *b*, wheel-shaped nucleus; and *c*, perinuclear halo.

average measurement in the long axis of 12 complete cells was 8μ, the maximum was 11μ, and the minimum 5·5μ. The cytoplasm was basophilic, for it stained characteristically with pyronin and with polychrome methylene blue. In very

thin sections it was ragged and almost granular (granuloplasma of Unna), but without real or specific granulations, also definitely vacuolated, and sometimes retracted from the circumference of the nucleus to form an unstained perinuclear halo. The nucleus was usually eccentric. It was round or slightly oval, and varied in size from 4 to 6·5μ, the average being 5μ. The chromatin stained well and tended to collect in masses at the periphery of the nucleus, while near its centre there was often a nucleolus coloured bright red with pyronin. A considerable number of the nuclei were somewhat shrunken and show hyperchromatosis, while in a few there was definite pyknosis; complete karyolysis was occasional. Some cells contained two, rarely three, nuclei, but without mitotic figures. Neutrophil myelocytes were very rare. The tumour cells were embedded in a delicate, scanty, fibrous-like stroma containing an occasional spindle-shaped nucleus. Blood spaces were few.

As pointed out by Kaufman,[5] Christian,[6] Ledingham,[7] and others the tumour cells in multiple myeloma have been classified by various observers into three main types: (*a*) myelocytic, though the granulations are not always so completely developed as in the true myelocyte; (*b*) premyelocytic cells which resemble the non-granular premyelocytes; and (*c*) plasmacytic, on account of their resemblance to plasma cells. Type B appears to be distinguished from C by the failure to stain characteristically with polychrome blue or pyronin-methyl-green, by the appearance of the nucleus, especially the absence of a mural arrangement of the chromatin, and sometimes by the larger size of the cells.[8 9] It is noteworthy that Permin's[10] three

FIG. 6.



Section of myeloma, Case 2, × 1200. Cells also of plasmacytic type. In addition to ragged cytoplasm note—*a*, eccentric nucleus; *b*, wheel-shaped nuclei; *c*, nucleolus; and *d*, vacuole in cytoplasm.

cases are all described by him as being of the premyelocytic type, while Christian described his six cases as being all of the plasmacytic type. This suggests that further research will show that the differences in the type of cell are more apparent than real, and are the result of differences in fixation, staining, and description, or perhaps in degree of anaplasia. The question is further complicated by the fact that the exact microscopical characters of the plasma cell are keenly disputed, while their occurrence in normal bone marrow is not universally recognised.

The unusual nature of the proteins found in the urine, though due in all probability to a more complete investigation in their chemical structure, might suggest that our case was an anomalous one. But the histological examination demonstrates conclusively that it is not only a true myeloma, but is practically identical with the cases classified by Christian, Wright,[11] and Ledingham as the plasmacytic type of growth. It appears to be the eighth example of this form of myelomatous tumour.

Addendum.

Cases of multiple myeloma are so rare that reference may be made to one which occurred in 1903.

CASE 2.—The patient, a male aged 49 years, under the care of Sir James Barr, died after six months' illness with numerous tumours in the vertebræ and ribs, while Bence Jones proteid was constantly present in the urine. The case was published by Moffat[12] in 1905 (who stated that the majority of the cells "were of the lymphocyte type"). Fortunately, one stained section is available, also a piece of growth preserved in Müller's fluid, and originally fixed in formol; from this paraffin sections were cut. The microscopical appearances of the tumour (Fig. 6) were identical with those of the preceding case, except that in the sections prepared from the tissue kept in Müller's fluid the nuclei were on the average 1μ larger, and as the peripheral distribution of the chromatin was more marked so the wheel-shaped appearance of the nucleus was more definite. The vacuolation of the cytoplasm was rather less distinct, though perinuclear halos were found. The other point of difference was the complete failure to stain the cells in a characteristic manner with pyronin and methyl-green even after oxidation with permanganate of potash, a failure which is almost certainly due to the method of fixation and the age of the specimen. The evidence therefore shows that this tumour is also of the plasmacytic type.

A RADICAL OPERATION FOR MALIGNANT DISEASE OF THE TESTIS.

BY RUSSELL HOWARD, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON, LONDON HOSPITAL; SURGEON, POPLAR HOSPITAL, ETC.

THE question of a radical operation for malignant disease of the testis has come more and more to the front of recent years. In other parts of the body the operations for malignant disease have been progressively elaborated until it is an axiom that extirpation of the growth, with the lymphatic glands the part drains into and the intervening lymphatics is the only radical form of operation, and that this should be done in all cases. In the case of the testicle, however, the deep situation of the involved lymphatics and the important structures which lie near them have appeared to negative the usual operative procedure, and surgeons on the whole have been content to perform castration and to trust that the lymphatics are not already infiltrated. The very few cases that escape subsequent recurrence in the glands show on what feeble grounds this hope rests, and a radical glandular operation appears to be the more urgent as local recurrence in the scrotum is rare.

Dr. J. B. Roberts of Philadelphia, in a paper published in 1902,[1] pointed this out, and he described a case in which he attempted to remove the glands by a transperitoneal incision. The operation, however, ended in the death of the patient after some months of illness. Dr. W. Osler, in a clinical lecture on Abdominal Tumours Associated with Disease of the Testicle, commented on this case as follows: "It would seem reasonable in all cases to remove them [the glands] as well as the primary tumour."[2] In a paper on the Clinical Aspects of Malignant Disease of the Testis published in 1907,[3] after analysing 57 cases and finding an overwhelming number with metastases in the glands, I discussed the possibility of more radical treatment, and argued that Dr. Roberts's case had shown that this was anatomically possible.

In THE LANCET in 1909[4] Mr. J. Bland-Sutton published a case of an improved method of removing the testicle and

[5] Kaufmann: Spezielle Pathologische Anatomie, p. 732.
[6] Christian: Journal of Experimental Medicine, vol. ix., p. 345.
[7] Weber and Ledingham: Royal Society of Medicine, Pathological Section, March, 1909, p. 196.
[8] Macallum: Journal of Experimental Medicine, vol. vi., No. 1, p. 59.
[9] Menne: Virchow's Archiv, Band clxxxiii., p. 123.
[10] Virchow's Archiv, Band clxxxix., p. 459.
[11] Wright: Johns Hopkins Hospital Reports, vol. ix., p. 359.
[12] Loc. cit.
[1] J. B. Roberts: Annals of Surgery, 1902, vol. xxxvii., p. 539.
[2] W. Osler: THE LANCET, May 25th, 1907, p. 1409.
[3] Russell Howard: Practitioner, 1907, vol. lxxix., p. 794.
[4] Bland-Sutton: THE LANCET, Nov. 13th, 1909, p. 1406.

spermatic cord for malignant disease, in which by an extra-peritoneal operation he had removed malignant glands from the lumbar region in a patient with malignant disease of the right testis. At the same time he removed the diseased organ with the spermatic cord and its lymphatics. Commenting on this case in an admirable paper on the lymphatics of the testicles recently published in THE LANCET (Fig. 1),[5] Dr. J. Kay Jamieson and Mr. J. F. Dobson say: "It cannot be allowed that either the operation of Dr. Roberts or that of Mr. Bland-Sutton warrant the use of the term 'radical'; by neither method is the 'lymphatic area' removed." They point out that "careful search," mentioned by Mr. Bland-Sutton, for the lymphatic glands is not the modern principle of dealing with malignant glands, "but the removal of masses of tissue known to contain glands, without any reference to individual glands," and that "the only effective way of securing them is to extirpate the cellulo-fatty tissue from a given area in which the glands are known to lie."

FIG. 1.

Arrangement of lymphatics of left testicle after Jamieson and Dobson.

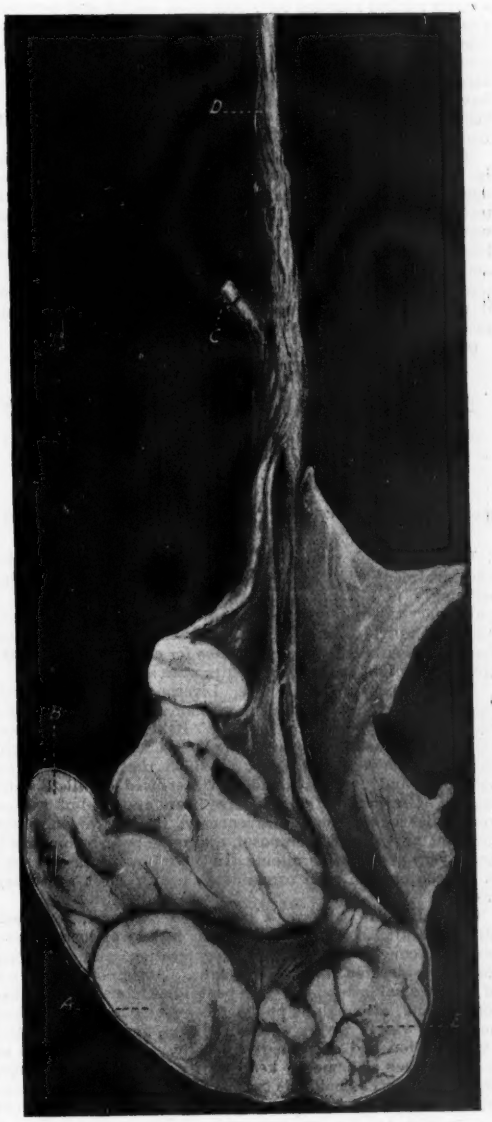
Since writing in 1907 I have been awaiting an opportunity for a radical operation on malignant disease of the testis, and this opportunity arrived in July, 1910, after the publication of Mr. Bland-Sutton's and Dr. Jamieson and Mr. Dobson's papers.

Notes of case.—The patient, a boy, aged 10 years, was admitted into the London Hospital complaining of a painless swelling of the left testis which had been present for ten weeks and which was increasing in size. On examination the left side of the scrotum was occupied by a soft irregular mass in which it was impossible to distinguish the body of the testis from the epididymis. A small hydrocele was present; the vas and cord were not involved. Rectal examination revealed nothing abnormal, and a careful examination of the abdomen revealed no mass in the lumbar region. The case was diagnosed as malignant disease of the testis, and a radical operation was decided upon.

Experiments carried out on the cadaver showed that it was possible to expose the aorta thoroughly by an extra-peritoneal incision, and notwithstanding the opinion of Jamieson and Dobson that "the transperitoneal method appears to be preferable," an extra-peritoneal operation was decided upon, as in Mr. Bland-Sutton's case. The object of the operation was to do a thorough radical operation on the lymphatic area into which the testis drained on the modern principles of the treatment of malignant growth, and that in spite of its being on the left side, and though Jamieson and Dobson say "that the intimate relations of the glands to the inferior mesenteric vessels and the renal vessels, and the fact that many of them lie under the duodenum, appear to forbid even a partial operation." At the same time it was fully recognised, according to Jamieson and Dobson's statement, that "the only effective method of removing the lumbar glands would be to strip the aorta and vena cava, the common iliac vessels, the upper part of the spermatic vessels on either side, and the trunk of the inferior mesenteric artery, of all the cellulo-fatty tissue lying around and between them from the level of the renal arteries downwards."

The operation.—An incision was made into the testis so as to confirm the diagnosis. This was found to be correct, and an incision was then made over the external ring and the spermatic cord was separated and ligatured so as to avoid loss of blood from the incision into the testis. A second incision was then made from the external ring in a curved direction external to the linea semilunaris to about 1½ inches above the umbilicus. All the layers of the abdominal wall were cut through and the peritoneum was exposed. This was dragged away from the retro-peritoneal tissue and was found to strip readily; the stripping was continued until the aorta and the common iliac and external iliac arteries were thoroughly exposed from the renal vessels downwards, the peritoneum being held back with broad retractors. The exposure was very thorough, and the whole length of the vessels was easily seen by the onlookers. The tissue round the aorta, renal arteries, inferior mesenteric, common and external iliacs, and the commencement of the internal iliacs was removed with scissors and Kocher's dissector until the vessels were quite clean as in an ordinary dissecting-room dissection. Numerous glands were removed in the tissue, but none seemed to be enlarged. When the big vessels were quite clean attention was turned to the spermatic vessels, which, with the lymphatics, had been turned back with the peritoneum. The testis with part of the scrotum was detached from everything except the spermatic

FIG. 2.



The parts removed. A, Body of testis. B, Globus major. C, Vas deferens. D, Artery, veins, and lymphatics removed in one piece. E, Globus minor.

cord, and the vas was ligatured as it turned down into the pelvis. The spermatic vessels were then stripped away from the peritoneum as far as the renal vein, a ligature was applied, and the whole growth, artery, veins, and lymphatics were removed. (Fig. 2.) The exposure of the vessels, &c., was so complete that the dissection was easily carried out without

[5] Jamieson and Dobson: THE LANCET, Feb. 19th, 1910, p. 493.

any danger. The duodenum readily turned back off the aorta. After removal of the testis the peritoneum was replaced, the retro-peritoneal area was drained with a tube, and the abdominal wall was sutured. The whole operation took one hour; there was no marked shock, and bleeding was insignificant.

The patient's convalescence was interrupted by a mild attack of pneumonia, but he left the hospital three and a half weeks after the operation with the wound soundly healed.

Dr. H. M. Turnbull, of the London Hospital Pathological Institute, reported as follows: "Small round-celled sarcoma of the epididymis and testicle. The growth consists of closely packed rounded cells with dark nuclei and very little protoplasm. The globus minor shows almost perfectly homogeneous infiltration with sarcoma cells. The left iliac glands and the left lumbar glands are normal, and show no sarcoma cells." The growth is peculiar in that it appears to have primarily affected the epididymis and to have spread to the testis, and not to be a primarily malignant growth of the body, as is usual.

The case was perhaps a fortunate one as a first operation in that it occurred in a thin boy, but that a truly radical operation on the lymphatic area in malignant disease of the testis is possible cannot be disputed. In fact, the operation went a step further than Jamieson and Dobson's ideal operation, in that it cleared the whole of the external iliac artery and vein, instead of the upper third only, and their dictum that the operation "is exceedingly difficult and dangerous, if not impracticable," does not hold good in boys, at any rate.

Devonshire-street, W.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY INTRAVENOUS INJECTIONS OF CHINOSOL WITH FORMALDEHYDE.

BY JOHN McELROY, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.

WHEN so much publicity is being given to the prevention and treatment of tuberculous conditions, the history of what seemingly is a rapid and perhaps permanent cure of a pulmonary tuberculous case may be of interest to readers of THE LANCET. Some of my professional brethren more fortunately situated as regards cases for extended trial of the treatment might see if their results were as pronounced.

Last year, when in Bootle, Liverpool, the intravenous injection of formaldehyde in pulmonary tuberculosis was brought to my notice by Dr. F. W. Baker Young, who used the apparatus as recommended by Dr. Robert Maguire of the Brompton Chest Hospital, but modified the strength of his solutions, and used as a medium sterilised distilled water instead of saline solution. I have heard and read of various germicides being used intravenously, but so far have not heard of anyone using chinosol, a quinine potash compound, and a very powerful germicide. In the following cases I used it in conjunction with formaldehyde with most gratifying results.

CASE 1.—The patient, a man aged 54 years, had been ailing for almost 12 months with a history of hæmoptysis, pleurisy, cough, and profuse expectoration, and of having lost a considerable amount of weight. Acting on the advice of his medical attendants he spent four months at a sanatorium, and, although he put on 21 pounds in weight, when he left he was in a very weak condition, and the cough and expectoration had decreased very little. He tried as well as possible when at home to keep up his sanatorium methods, and for five weeks held his own as far as his weight was concerned, but was not getting any stronger. He then began to lose weight, and for the three weeks before coming under my care lost 1 pound, 1½ pounds, and 2½ pounds respectively. Under the intravenous injection of chinosol and formaldehyde he recovered his weight, rapidly regained strength, and at the end of four weeks' treatment was able to walk—without unduly distressing himself—two or three miles at a time. His chest condition before treatment showed symptoms of a cavity at the apex of the right lung, with signs of involvement of the middle and lower lobes. After treatment all adventitious sounds had disappeared, and the only appreciable deficiency was at the apex, where the expansion was not what it ought to be, this naturally being due to the contraction brought about by the healing process. Dr. J. A. Sinton of the Queen's University, Belfast, examined the sputum for me before, during, and after treatment, and reported as follows:

Before treatment.—Oct. 23rd, 1909: Tubercle bacilli very numerous and averaging about 15 per field.
During treatment.—Nov. 1st: Tubercle bacilli less numerous. 23rd: Tubercle bacilli scanty. Dec. 13th: Tubercle bacilli very scanty and nearly all of the granular type, and averaging about one per field.
Since treatment.—Feb. 21st, 1910: Tubercle bacilli absent. April 18th: Tubercle bacilli absent.

From Dec. 13th, 1909, onwards I was unable to get a specimen of sputum, but on Feb. 21st, 1910, the patient was working all day in the rain and dried his wet clothes on himself. He then took an acute attack of bronchitis, and at this time I had his sputum examined, when Dr. Sinton, after a most exhaustive examination, was unable to detect any tubercle bacilli. I was able to get a small specimen again on April 18th, and Dr. Sinton notified me that he was still unable to detect any bacilli. At the present time (Nov. 5th) the patient is as well as possible and is working as hard as ever he did in all kinds of weather. He cycles to and from his business, distant over two miles, and all uphill the one way. Expectoration is completely absent. The patient is an engineer, commences his work at 6 A.M., and is often working all night.

Since treating the foregoing case I have had two more cases under my care, brief details of which I will now give.

CASE 2.—In this case expectoration has been reduced to less than one-half, the weight has increased to normal, and the patient's strength has improved vastly. The sputum at the present date shows a reduction in tubercle bacilli from 20 to 12 per field, and the granular type is now predominant. This patient at first only got half the number of injections I considered he would require, as he developed a phlebitis in his veins and I had to stop treatment. He is again receiving injections, but unfortunately I have a great deal of difficulty in administering them, as his veins seem to be very easily irritated. He has, however, not lost ground. His chest condition is much better and the negative lung pressure is almost doubled.

CASE 3.—This patient is still under observation, but I have stopped treatment, and he has been working at his trade—that of a ship carpenter—for the last five weeks. The night sweats stopped after about ten injections and his temperature became normal, fluctuating occasionally until Sept. 13th, when it became normal, and has since continued to do so. I administered the first injection upon July 6th, and between that date and Sept. 18th administered 36 injections in all. On Oct. 3rd he resumed work, and at the present date he is working hard from 6 A.M. till 5.30 P.M. in all kinds of weather without experiencing any ill results. He can walk five miles in one and a quarter hours without undue fatigue. All râles and crepitations have disappeared from the chest, medium râles being very pronounced back and front in right lung and fine crepitations in upper portion of left lung before treatment. Expectoration is almost absent, the tubercle bacilli being reduced from 40 to 8 per field, the bigger number in this case also being granular. At the same rate of decrease I hope to see it negative in about another two months.

The method of administering injections was as follows, Dr. Maguire's apparatus being used. 50 cubic centimetres of a 1/2000 solution of formaldehyde plus 1/4000 solution of chinosol were injected into the median-basilic or median-cephalic vein—the usual precautions being taken—and this was repeated daily, the strength being gradually increased.

In Case 1 I administered 33 injections altogether on 33 consecutive days, the strength being increased to 1/500 in the case of the formaldehyde and to 1/1000 in the case of the chinosol. Many cases will require more injections, but I do not consider it advisable to increase the strength of the formaldehyde above 1/500, the strength of the solution being increased above that figure by increasing the chinosol from 1/1000 to 1/500. Beyond slight gastric disturbance the patient suffered no inconvenience.

Has the chinosol in conjunction with the formaldehyde, when injected intravenously, any destructive effect upon the tubercle bacillus itself; or, on the other hand, does it assist nature's efforts and cause a reactive inflammation around the tuberculous area, and so encapsulate the caseous mass, and by so doing not only isolate and bring about the natural cure of the diseased area, but prevent the admission of the

ordinary bacteria of suppuration which are an additional danger to the natural process of healing? If quinine has a specific action on the malarial fevers, is it not possible that in the case of chinosol, injected intravenously, it may have a selective, destructive action upon the tubercle bacillus itself? In Dr. Sinton's report of Dec. 13th on the sputum of the patient in Case 1, the bacilli were practically all of the granular type, and in the reports of the sputa in Cases 2 and 3 the bacilli have become more granular. This condition I consider is worthy of further inquiry, and suggests direct action upon the bacilli.

Sanatorium treatment is undoubtedly of great assistance in retarding the progress of the disease, but I have yet to meet with a case with pronounced chest symptoms and a sputum rich in tubercle bacilli that sanatorium treatment alone has so definitely or so quickly arrested. I have seen the reports of several sanatoriums and in none have I seen any record made of the sputum conditions when the patient left the sanatorium. What is the good of a treatment if the patient—even if a good deal improved—is allowed to expectorate promiscuously a sputum containing tubercle bacilli? This is where the real danger lies. Until we have more stringent laws relative to the proper preventive measures to be adopted against infection, sanatorium treatment alone will not be of as much service to the community as it might.

There are other points which one might elaborate at great length, more particularly the proper segregation of patients in sanatoriums, but what I have written is primarily to call attention to the possible, I think I might say probable, efficacy of intravenous injections of chinosol and formaldehyde.

I have to thank Professor J. A. Lindsay for kindly examining the first of my three patients after treatment; Dr. Sinton for his most careful examinations of the sputum; and Dr. Baker Young for his practical instructions in the technique of intravenous injections.

Belfast.

NOTES ON THE OPERATIVE TREATMENT OF PAPILLOMA OF THE BLADDER.

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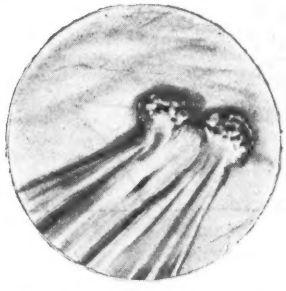
THE recurrence of papilloma of the bladder after operation is a commonplace of surgical conversation and a constant, if reluctant, admission of all writings on the subject. Our present knowledge would lead us to suppose that there may be several factors involved in the causation of this recurrence. I shall here deal only with those which are specially related to the technique of the operations undertaken for the removal of these papillomata. Two probable and important causes of recurrence are: (1) the incomplete removal of the papilloma at the time of the operation; and (2) the implantation of fresh papillomata during the operation. In the course of cystoscopic examinations upon patients previously operated upon for papilloma of the bladder by other surgeons at a recent date—that is to say, within a few weeks or months of the operation—I have in more than one case noted a small bud of papilloma or two small buds present in the bladder. On more detailed examination I found that the papillomata were set at the edge of the scar which resulted from the removal of the original growth. The following notes are illustrative of this statement:—

CASE 1.—The patient was a man, aged 35 years, who came under my observation at St. Peter's Hospital in August, 1908, suffering from hæmaturia. Two months previously he had undergone an operation for papilloma of the bladder at the hands of another surgeon. On cystoscopy the bladder was healthy, with the exception of an area in the neighbourhood of the left ureteric orifice. (Fig. 1.) A quarter of an inch outside the left ureteric orifice there were two small buds of papillomatous growth close together, and rather less than a split-pea in size. From the base of these, folds of unusually smooth and firm-looking mucous membrane passed inwards towards the middle line. In this scar tissue the left ureteric orifice appeared as a slit running parallel to the folds. I obtained the following information in regard to the operation. At the end of May, 1908, a fairly large pedunculated papilloma was found to the outer side of the left ureteric orifice and a smaller one lying near the apex of the bladder. The large growth was grasped in forceps and twisted off. Another small growth was similarly treated. Oozing from the base of each was stopped by touching with the electric cautery. In December, 1900, eight years previous to this operation, he had undergone a similar operation for a pedunculated papilloma situated outside the left ureteric orifice. In this case, therefore, there was recurrence in the same spot

FIG. 1.



Cystoscopic view of recurrent papillomata on scar of previous operation. The ureteric orifice is seen in the scar.

after two similar operations. In such cases the operation, whatever form it took, was not sufficiently radical to remove the whole growth.

Yet another form of recurrence may be met with after the removal of a papilloma. At some part of the bladder adjacent to, or remote from, the site of the original growth one or more papillomata are found, while the operation area is free from growth. I have no doubt, from the size of the papillomata and their discovery so soon after the operation, that in some of these cases the tumours were present when the original papilloma was removed, but were overlooked.

There are other cases where a solitary papilloma has been carefully localised and its isolation definitely determined by a pre-operative cystoscopy, and where, in about a year later, the bladder has been found strewn with numerous sma papillomata.

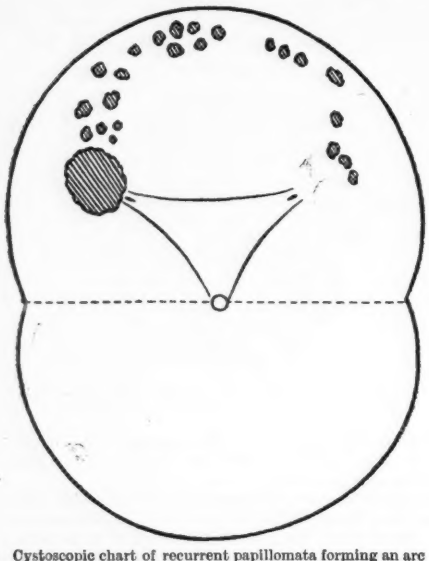
CASE 2.—In August, 1905, I removed a pedunculated papilloma from the neighbourhood of the right ureter in a man aged 31 years, who had suffered for 12 months from intermittent hæmaturia. The operation was performed by placing a clamp on the pedicle of the tumour and clipping away the papilloma with curved scissors. The clamp was removed and the electric cautery applied to the base to stop oozing. Three months later a few drops of blood were noticed at the end of micturition. In February, 1906, attacks of hæmaturia commenced and recurred at intervals until I saw him in August, 1906. The hæmaturia lasted four or five days and the blood was well mixed with the urine. There was increased frequency of micturition to 12 or 14 times and scalding during the act. Cystoscopy in June, 1906, showed a fair-sized papilloma on the outer lip of the right ureter at the spot from which the first tumour had been removed. From this spot there was a track of tiny papillomatous buds, which passed in the form of an arc to the apex of the bladder and continued symmetrically across the other side of the bladder almost to the left ureter. The number of these small papillomata was between 20 and 30. (Fig. 2.) In such a case it seems most probable that the small papillomata are seedlings implanted on the bladder wall at the time of the operation, and the trail that they frequently form from the site of the original growth to the scar of the cystotomy wound is evidence in support of this view.

In operating upon cases of recurrent papilloma I have frequently found the largest growth situated on the site of the scar of the cystotomy wound or immediately adjacent to it. There may or may not be a recurrence at the site of the original growth. I have little doubt that such a papilloma was implanted during the removal of the original growth. The two cystoscopic charts, which follow, are selected from a number of such cases. They are reproduced from patients

on whom I afterwards operated. The following is a brief synopsis of these cases:—

CASE 3.—The patient, a married woman, aged 56 years, was under the care of Dr. T. Hoskings, who asked me to see her for severe hæmaturia in October, 1909. Six years previously a small papilloma had been removed by another surgeon after six months of intermittent hæmaturia. She

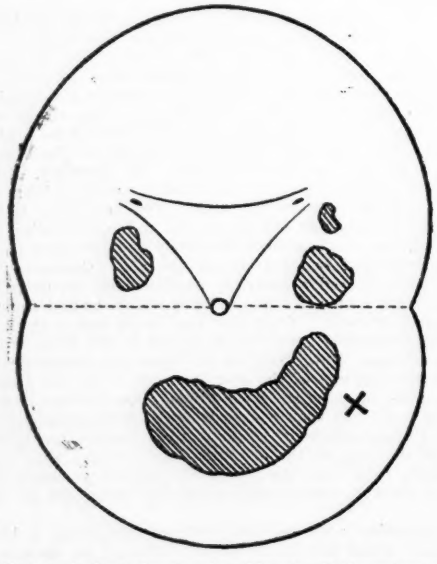
FIG. 2.



Cystoscopic chart of recurrent papillomata forming an arc extending to apex of bladder.

was free from symptoms for 18 months, and then the bleeding recommenced, and had continued at intervals since. The intervals between the attacks varied from one to six weeks. I saw her during a period of hæmaturia, which had been continuous for 14 days. The urine was dark brown and con-

FIG. 3.

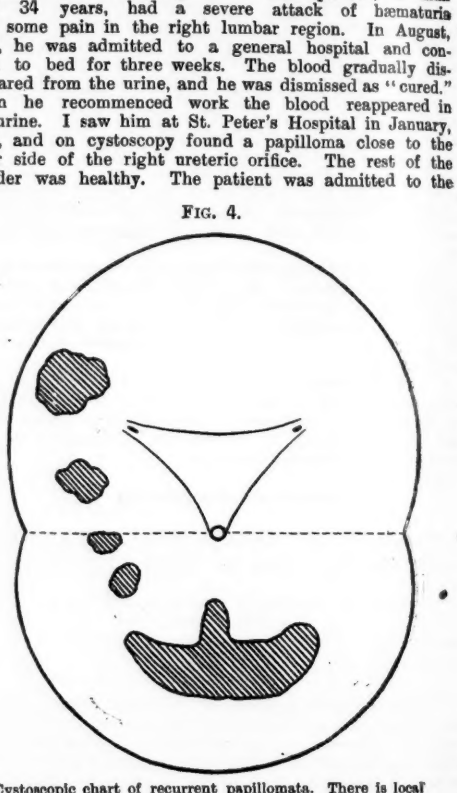


Cystoscopic chart of recurrent papillomata. The largest mass lay on the old cystotomy scar. At × a small bud of papilloma was hidden from view and discovered at operation.

tained clots. The patient was a stout, healthy looking woman. Cystoscopy showed four distinct papillomatous growths, three of which were of medium size and subsessile, varying from the size of a large pea to that of a hazel-nut, while the fourth was a large mass about two and a half inches in breadth and lying across the middle line on the anterior wall about half-way between the urethral meatus and the apex. (Fig. 3.) The surface of the growths was sponge-like without any long tentacles. There was no sign of infiltration of the mucous membrane of the bladder. The mucous membrane around the right ureteric orifice was scarred and the papilloma had probably been removed from this spot. I excised the papillomata in the manner that I shall presently describe.

CASE 4.—The second chart (Fig. 4) represents the bladder in the following case. The patient, a man aged 34 years, had a severe attack of hæmaturia with some pain in the right lumbar region. In August, 1907, he was admitted to a general hospital and confined to bed for three weeks. The blood gradually disappeared from the urine, and he was dismissed as "cured." When he recommenced work the blood reappeared in his urine. I saw him at St. Peter's Hospital in January, 1908, and on cystoscopy found a papilloma close to the outer side of the right ureteric orifice. The rest of the bladder was healthy. The patient was admitted to the

FIG. 4.



Cystoscopic chart of recurrent papillomata. There is local recurrence outside the right ureteric orifice and a trail to the cystotomy wound, on the scar of which the largest mass is situated.

hospital and an operation was performed by one of my colleagues. The growth was grasped in forceps and twisted off "fairly cleanly." The patient was well for 15 months, when the bleeding commenced again. I cystoscoped him in October, 1909, and found five distinct masses of papilloma. One rather low, and apparently sessile, mass lay immediately outside and behind the right ureter in the position of the original growth. These smaller clumps formed an almost continuous track, which passed forwards and upwards to the right of the trigone. On the anterior wall, about two inches above the internal meatus, lay a large mass of papilloma with a long axis of over two inches lying transversely across the middle line. (Fig. 4.) I removed these growths in November, 1909.

It is worth while from the operative point of view to note these points, and so to plan the operation as to avoid such sources of recurrence. For some years past I have operated with this view, and the following is an account of the technique that has developed.

1. *Preliminary cystoscopy.*—Apart from the question of diagnosis of a bladder growth and of the recognition of its nature, a pre-operative cystoscopy should be made to determine the exact number and position of the papillomata. It is not sufficient to trust to touch and sight to display the number and position of the growths *after* the bladder has

been opened. The bladder is a deep-seated collapsible organ, which falls into innumerable folds when it is opened. Among these folds papillomata are readily concealed. The surgeon who trusts to cystotomy to display the tumours is likely to overlook small buds or even papillomata of some size which are hidden between these folds. This is more likely to happen where cystitis is present as a complication. After the removal of one papilloma bleeding frequently obscures the view, so that unless there is some previous knowledge as to the exact number and position of the growths the surgeon is working at a disadvantage.

Where the papillomata are multiple I make a chart of their number and position, and with this before me at the operation there is little likelihood that small detached papillomata will be overlooked. Two of these charts have been reproduced to illustrate the cases just described. With the bladder fully distended with fluid and a good light the growths are readily counted and localised with the cystoscope.

Two difficulties in regard to this pre-operative cystoscopy may be mentioned. Occasionally on the anterior or lateral walls a large papilloma may conceal one or two smaller buds from view when they lie immediately behind (Fig. 3, ×), but in this position they are little likely to escape observation at the operation, and it should be the first care of the surgeon on opening the bladder to verify the numbers and position of the tumours already charted, and to note any that may be hidden from the cystoscopic view. Again, the mere size of a single papilloma may so fill the bladder that the beak of the cystoscope sinks directly into its folds. Complete darkness may be the result, or the folds of the growth restrict the movements of the cystoscope beak and only permit a small part of the growth to be seen. Such a case as the following is, however, rare.

CASE 5.—In September, 1909, I saw a man, aged 58 years, in consultation with Mr. J. F. Jennings. He gave a history of 12 months' hæmaturia, which first appeared after bicycling. There had been three attacks of hæmaturia of sudden onset and short duration. Cystoscopy was performed under eucaine. The bladder wash returned clear at once, and a distension of 10 ounces was borne without discomfort. On introducing the cystoscope the bladder appeared to be very dark, and there was a little difficulty in manipulating the cystoscope. On rotating the instrument the edge of a papilloma, close to the window of the cystoscope, suddenly became brilliantly illuminated, and I realised that I had pushed the beak into the middle of a large papilloma. Subsequent efforts to obtain a better view were fruitless, and operation was recommended. On Sept. 7th I removed a large single papilloma the size of a Tangerine orange. The rest of the bladder was healthy.

2. *The proper exposure of the growth.*—A vertical median suprapubic wound of 3 inches will suffice for most operations upon vesical papillomata. In stout patients the length of the wound through the skin and fat may be extended, but the separation of the recti need not exceed this limit. An extension of the abdominal wound upwards towards the umbilicus does not give a better exposure of the bladder, but merely uncovers more peritoneum. If further room is required in a powerful man, whose boisterous respiration and the rigidity of whose recti are not controlled by deep anæsthesia, it is best obtained by incising each rectus muscle about 2 inches above the pubes, or if the manipulation is likely to be required on one side more than the other the corresponding rectus may be cut transversely for one-third or so of its width. I usually place a catgut suture through the upper cut end of the muscle at once to help in the repair of the muscle at the completion of the operation. I have not had to resort to a transverse suprapubic incision for the removal of simple papillomata.

When the bladder is opened suprapubically the walls collapse upon the base, so that the whole organ drops down into the pelvis. If the intra-peritoneal tension is low, as it may be in aged and feeble subjects, a large air-filled space is left. Usually, however, the intra-peritoneal pressure forces the peritoneum with coils of small intestine into this space, and the bladder disappears from view. If the edges of the bladder wound are held up by forceps or sutures the posterior wall is forced towards the pubes and the lateral walls towards the middle line by the same pressure, so that a view of the base of the organ cannot be obtained. These difficulties are overcome in the following manner. Having opened the bladder a suture is placed through the whole thickness of each lip of the bladder wound. The patient is now placed in the full Trendelenburg position. This is an indispensable factor in the proper exposure of the interior of the bladder. The bulging of the upper or posterior wall of the bladder now disappears or is easily controlled. There is still a tendency for the lateral walls of the bladder to collapse and hide the base and the abdominal and vesical wounds must be retracted. In order to overcome these obstacles to a full view I have designed a retractor which was recently described in THE LANCET (March 5th, 1910).

FIG. 5.

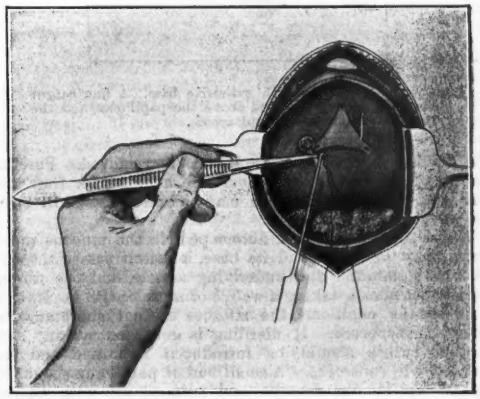
A bladder retractor.

By grasping the handle of this retractor with the thumb held vertically and tucked into the recurved portion, traction is exerted on the abdominal wound, and at the same time the bladder wall is pushed outwards. The shank of the instrument should be flat on the skin of the abdomen. I usually place a broad retractor on the side opposite to that on which the papilloma is set and a narrow blade retractor on the same side. By these means and by the aid of a head-lamp the interior of the bladder is fully displayed.

It is sometimes necessary to place a roll of gauze in the post-trigonal space to control still further a bulging posterior wall. I have found that careful preparation of the bowel beforehand and the quiet anæsthesia of chloroform during the operation are factors which are of some importance. The first care of the surgeon will be to enumerate the growths and compare them with his chart.

3. *The removal of the papillomata.*—Papillomata vary greatly in their relation to the vesical mucous membrane. There are papillomata, invariably single, which are attached to the mucous membrane by a long stalk, and there are others set on a short, thick stem, but still distinctly pedunculated.

FIG. 6.



Removal of a solitary pedunculated papilloma; a thread of catgut is being passed through the base.

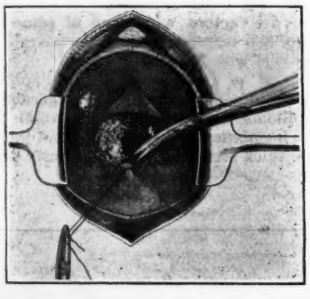
The most frequent type is set upon the mucous membrane like a well-shaped sponge of rather coarse texture, and attached by a base so short that it cannot be called a pedicle, yet too narrow for the arrangement to be termed sessile. There are others which are sessile and which carpet the mucous membrane for considerable areas like a luxuriant

low shrub. All varieties, with the exception of the long pedicled type, may co-exist in the same bladder. A very large growth is frequently solitary, and may have a short and comparatively narrow base of attachment, which may, however, extend along the mucous membrane for an inch or more.

In removing the pedicled variety I usually pick the growth up in long fine forceps, and pass a double strand of very fine catgut through the base of the pedicle, or, better, through the adjacent mucous membrane, which is raised by putting the pedicle on the stretch. (Fig. 6.) A fine, rounded, curved needle is used for this purpose, and held in a long, fine needle holder. For transfixing the base at difficult angles I use a small, fine, curved needle, set at right angles to a long fine handle, which is left untempered for two inches close to the needle, so that it may be bent at will to any angle. The thread of catgut is severed and the needle withdrawn. The two threads are now tied, so that one half of the pedicle is grasped in each, and the pedicle cut through above this. Usually there is no bleeding, but if oozing does occur another stitch may be introduced. The catgut stitches are cut short.

In larger growths with a short narrow base attached along a line of mucous membrane I commence by placing a catgut stitch through the mucous membrane and muscle above the nearest end of the pedicle. This raises a ridge of mucous membrane, and with scissors this is cut across just short of the pedicle. (Fig. 7.) Another catgut stitch is introduced by means of the special needle described above. This is tied and a further cut made with the scissors, taking care to clear the last suture and not to cut it away. Should a vessel spout it is picked up in long pressure forceps, which are left on until the papilloma is removed and then taken off, or a catgut ligature may be applied. Bleeding from these vessels is usually controlled by pressure forceps and the pressure of the sutures which close the wound. The cutting and stitching

FIG. 7.



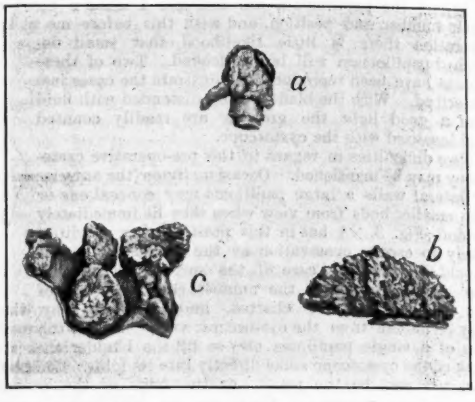
Removal of papilloma with extensive base. A fine catgut suture has been introduced above the papilloma, and the ridge thus raised has been cut across.

are continued until the papilloma is removed. Forcible traction upon the sutures should be avoided, for they will tear out, but gentle traction may be exerted and will bring the wound into closer view.

Where there is a thick, fibrous pedicle the mucous membrane may be cut round its base, a stitch passed through mucous membrane and underlying muscle, and the fibrous pedicle cut across, taking a wedge of muscle with it. Having removed the papilloma the stitches are cut short and the wound is inspected. If bleeding is going on at any spot another suture should be introduced and tied and the pressure will control it. A small bud of papilloma should be picked up in fine forceps and snipped off with curved scissors, taking a piece of mucous membrane with it. The cut edges are then brought together with a fine catgut stitch. Where an area of mucous membrane is carpeted with low, shrub-like growth, the strip of the membrane bearing the growths should be excised with curved scissors, and the cut edges united with a series of fine catgut stitches (Fig. 8). In removing the papillomata care should be taken that the edges of the cystotomy wound are not soiled. Before leaving each little wound the bleeding must be completely stopped. Sometimes an oozing from the mucous membrane is difficult to control, and occasionally a few touches with a fine electro-cautery point are necessary.

It will be noted that the above methods are dependent on good exposure, clean cutting, and accurate suture. In my view rapid healing is more likely to be promoted in this way than by any method of crushing, tearing, or twisting of the base of the growth. The catgut sutures have not caused any inconvenience in my hands. On examination of the bladder

FIG. 8.



Three types of papillomata after removal. (*a*) Cauliflower-like papilloma with fibrous pedicle. The mucous membrane has partly retracted from the fibrous core of the pedicle. (*b*) Sponge-like papilloma removed with mucous membrane at base. (*c*) Strip of mucous membrane covered with low shrub-like growth.

with the cystoscope after recovery from such an operation, no trace of the suture is to be found. Silk sutures are to be avoided, as they almost always accumulate phosphate deposit, and give rise to trouble afterwards.

A word must be said in regard to clamps. Some years ago I had a clamp made with flat blades, one grooved and the other ridged, about one-eighth of an inch thick, and set at an angle to strong handles. With this I proposed to clamp the base of the growths, and with an instrument like a large adenoid curette to scrape the papillomata from the surface of the clamp. I found there were several objections to this method. It was very difficult to get clamps of the size and angle to suit the varieties and different positions at which papillomata are found in the bladder, so that if the papillomata were to be accurately clamped a number of instruments would be required. Many papillomata are closely related to the ureteric openings, and there is a very real danger of including the ureteric orifice in the clamp, if the clamp is applied, as it should be, so as to include mucous membrane in the bite. I found further that there was a tendency of some part of a large base to slip out of a clamp altogether, and troublesome bleeding followed.

Where I have to deal with a large solitary papilloma I sometimes use a Guyon's clamp in order to steady the base of the tumour during the stitching. This clamp has a very convenient curve, and on the contact surface of one blade there are several teeth, which sink into corresponding holes on the contact surface of the other blade. This prevents any portion of the pedicle from slipping out of the clamp. The clamp should be carefully adjusted so as to grasp the base of the papilloma with some mucous membrane. When it is in position and locked catgut sutures should be placed on the bladder side of the base, dipping below the convex border of the clamp and out at the other side. These are held aside; the papilloma is clipped away from the concave border of the clamp, which is then removed, and the sutures tied in series, introducing an additional one or more if necessary. This method may be used in the large isolated type of papilloma. It is described and recommended by Albarran.[1] It is not suited to the form in which there are numerous small, scattered papillomata, or where a considerable area of bladder wall is covered with clusters of papillomata.

[1] Médecine Opératoire des Voies Urinaires, 1909.

In operating upon tumours in the bladder, I have frequently noticed a peculiar condition of the bladder wall, and which seems worthy of mention. After working in the bladder for half or three-quarters of an hour the mucous membrane becomes thick and rather œdematous in appearance, and the bladder muscle contracts and thickens, so that the exposure of the interior of the viscus becomes more difficult. These changes are probably due to the prolonged exposure to air, but they are followed by no ill-effects.

Having carefully freed the bladder from blood-clot, and removed gauze pads or swabs from the post-trigonal area, the question of closing or draining the bladder will arise. After a trial of suturing the cystotomy wound in these cases, and after one or two failures from serious hæmorrhage, I have abandoned the method. If the bladder is sutured and the urine, by any chance, such as the blocking of the catheter by a clot or the slipping of the tied-in catheter, accumulates and distends it, hæmorrhage is encouraged, and should hæmorrhage take place a retained catheter, however large, is not a sufficient means of drainage. I now drain the bladder in these cases from the first by means of a large rubber tube, three-quarters of an inch in diameter. A stitch or two are usually required to close the bladder wound around this tube. In addition I place a small rubber tube, which dips into the prevesical space, at the lower angle of the wound. This ensures the removal of any urine which may escape into this space. The abdominal wound is carefully repaired by uniting the cut portions of recti and approximating the recti muscles by means of catgut sutures.

In the after-treatment I use a very simple method of removing the urine which is neither a syphon nor a suction method, but merely drains the overflow. One end of a yard of medium-sized soft rubber Paul's colotomy tubing is drawn over the prominent end of the rubber drainage-tube and tied round with a piece of silk to retain it. This is brought through the dressings and passing over the edge of the bed dips into a jar. To ensure that the surfaces do not adhere and block the flow of urine two drachms of olive oil are poured through the tube before adjusting it. The tube is changed at each daily dressing, when the bladder is irrigated with oxycyanide of mercury (1 in 10,000). On the fourth day the drainage-tubes are both removed and the urine may be allowed to soak into large pads of cellulose wadding, or an Irving apparatus may be applied. In my experience the wound heals more quickly without any apparatus.

Queen Anne-street, W.

ON CHRONIC BRONCHITIS AND EMPHYSEMA AS THE RESULT OF ACUTE PNEUMONIA.

BY SAMUEL WEST, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN AND LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE, ST. BARTHOLOMEW'S HOSPITAL, ETC.

IT is not surprising that so severe a disease as pneumonia should be followed by serious nutritive changes in the lungs. Of the local changes in the consolidated parts it is not necessary to speak. I wish to draw attention to less recognised results which affect the lungs generally. The two affections I refer to are bronchitis, on the one hand, and emphysema on the other.

The signs of bronchitis associated with pneumonia in its acute stage have a different significance according as they have preceded the attack of pneumonia or developed in the course of it. Where the pneumonia is subsequent—i.e., occurs in the course of bronchitis—the association of the two affections is awkward but not necessarily of very grave significance. Where, on the other hand, the physical signs of general bronchitis develop in the course of the pneumonia they indicate not a mere bronchitis or complication of the pneumonia but pulmonary failure, a very serious condition and almost necessarily fatal.

In a severe case of pneumonia the pathological changes are not limited to the parts which become consolidated but are widespread and affect the whole of both lungs. This is recognised pathologically, but clinically is usually disregarded unless during the acute stage the signs of congestion develop in the rest of the lungs. After the pneumonia is past these general nutritive changes leave behind a delicacy of the lungs which may last for months and show itself in a tendency to bronchitis on slight provocation. If this were recognised and dealt with appropriately the patient might be spared much distress and saved the risk of becoming a chronic bronchitic.

Besides bronchitis, there is also emphysema to be considered. Vicarious or complementary emphysema is, of course, common enough during the acute stage of pneumonia, but this is only transient and rapidly passes away. True or ordinary emphysema may be observed, and not rarely if it be looked for, to develop after pneumonia in a patient who before the attack presented no signs of it, so that I cannot doubt that the nutritive disturbances produced during the acute attack may, and not infrequently do, initiate those atrophic changes which end in the wasting and atrophy of the alveolar walls characteristic of ordinary emphysema.

Much might be done to obviate these risks if it were known and remembered how profoundly the general nutrition of the lungs is affected in any severe case of pneumonia, and that the delicacy thus engendered may lead to recurrent bronchitis and to permanent emphysema.

It should therefore be the rule of practice to take great care of a convalescent from pneumonia for at least 12 months. This rule is often disregarded and with disastrous results, for the reason that the resolution of the local lesion is so rapid and complete that the possibility of any widespread changes such as those to which I have referred is not recognised or suspected.

Wimpole-street, W.

AORTIC REGURGITATION.[1]

BY WALTER BROADBENT, M.A., M.D. CANTAB., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL; PHYSICIAN TO THE ROYAL ALEXANDRA HOSPITAL FOR CHILDREN.

DILATATION and hypertrophy of the heart are carried to a greater extent in aortic regurgitation than in any valvular disease. Heaving pulsation of the lower chest is very evident until the heart is failing seriously. Often there is systolic retraction of the intercostal spaces near the sternum, due to atmospheric pressure and not to adherent pericardium. Also systolic retraction of the lower ribs at the back on the left, and even the right, may be caused by the hypertrophied heart pulling on the diaphragm, which is attached to these ribs. This used to be considered a sign of adherent pericardium, and is so if the heart is not much hypertrophied, but a large heart can pull on the diaphragm sufficiently to cause it without the pericardium being adherent.

At the apex the first sound is prolonged and not as loud as normal. A systolic murmur is often present, which may be conducted from the aortic orifice, or may be that of mitral regurgitation. If the murmur, traced from the aortic cartilage across the chest to the apex, becomes progressively less loud, one may conclude that it is conducted, but if it becomes less loud about half-way and increases towards the apex, it is mitral. Also when it is mitral, the first sound is diminished and may be absent at the apex, and the murmur is conducted outside the apex beat. A second sound is heard and usually a soft diastolic murmur.

Not infrequently a presystolic thrill can be felt and a loud presystolic murmur heard at the apex. Mitral stenosis would be incompatible with life, if there was much aortic regurgitation, blood would never get through a stenosed mitral orifice against the pressure in the left ventricle, and where the pulse is large and collapsing no mitral stenosis is found post mortem. The probable explanation is that the regurgitant stream from the aorta strikes against the anterior flap of the mitral valve and causes vibrations in it, or it may be that the valve is prevented by the aortic regurgitant stream from falling back, and so lies across the mitral orifice to a certain extent. This is sometimes called Flint's murmur, having been first described by Austin Flint in 1862. When there are aortic stenosis and regurgitation, in which the stenosis

[1] Portion of a paper read before the Brighton and Sussex Medico-Chirurgical Society.

predominates, mitral stenosis is not infrequent, but even then a presystolic murmur is not always heard. I remember one case where post mortem there were mitral and tricuspid stenosis as well as aortic stenosis, with some regurgitation, but no presystolic murmur was heard during the two months she was in hospital, but the first sound at the apex was short and loud.

Thayer, at the Johns Hopkins Hospital in 1901, found in 74 cases of aortic regurgitation followed by post-mortem examination 45 had had a presystolic murmur during life, but in only 12 was there any mitral stenosis, and in these the pulse was noted as not large, and in most of them there was a short loud snapping first sound at the apex. But of the 29 with no presystolic murmur 4 had mitral stenosis. He illustrates the difficulty of diagnosis by a percentage table of physical signs, and concludes that the size of the pulse is the most reliable guide.

—	Pure mitral stenosis, 17 cases.	Mitral stenosis and aortic regurgitation, 14 cases.	Aortic regurgitation and Flint's murmur, 33 cases.
	Per cent.	Per cent.	Per cent.
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Presystolic thrill ...	64·7	50·0	42·0
Tapping systolic shock	76·4	50·0	15·1
Snapping first sound	64·7	78·5	30·3

The systolic blood pressure, as measured by the sphygmomanometer, is very high in aortic regurgitation, but the diastolic is low. The difference between the systolic and diastolic pressures is a fair measure of the amount of regurgitation, the greater the difference the greater the regurgitation.

The pulse is sometimes bisferiens; a distinct double beat may be felt when moderate pressure is put on the artery. In a tracing there is a double top to the wave, the second being higher than the first. This is often only present on the left side, while the right pulse is normal, and it is, I believe, invariably more marked on the left side. Some aortic stenosis or high peripheral resistance has been present in all the fully described cases. Roy and Adami, in their investigations on the hearts of dogs in 1890, found that a rise of peripheral resistance made the intra-ventricular pressure curve anacrotic, as if the contraction were reinforced by a renewed effort. It is probable, therefore, that in cases of aortic regurgitation with stenosis supervening the intra-ventricular pressure curve would be anacrotic, and, if the valves are much destroyed, the pressure curve in the aorta would correspond closely to the intra-ventricular, and an anacrotic or bisferiens pulse might be conveyed to the arteries. The explanation of the bisferiens pulse being more marked in the left carotid and radial is that the natural direction of the main blood stream is towards the left carotid (a fact often quoted as the cause of the greater frequency of cerebral embolism on the left side), and so the pressure curve of the aorta is more readily conveyed.

To estimate the amount of regurgitation the pulse is the most important factor. A large artery and very collapsing pulse, when the wrist is held above the level of the shoulder, indicate much regurgitation, and *vice versâ*. But if the pulse is irregular proper compensation has not been attained, and there is more regurgitation than the pulse shows. In the last stages there may also not be sufficient force in the heart to produce a collapsing pulse at all. In atheromatous regurgitation the artery is large and tortuous from long-standing high tension, but there is not the same collapse of the pulse; sphygmographic tracings show a more sustained wave, and the amount of regurgitation is never very great.

The degree of dilatation and hypertrophy of the left ventricle is a help in estimating the extent of the regurgitation, but, if prolonged rest has not been insisted upon after the onset or after illnesses attended with fever, the dilatation will be in excess of what was necessary for compensation.

If the heart is much hypertrophied but the pulse is not correspondingly collapsing, either aortic stenosis predominates or the hypertrophy is the result of old high tension or kidney disease. If due to aortic stenosis there will be no second sound heard in the carotids, the pulse wave will be long and slow and the artery soft walled; but if due to old high tension the second sound in the carotids will be loud and the artery thick walled and probably tortuous.

Prognosis.

"When, with a diastolic murmur, the aortic second sound is still audible in the neck, the pulse exhibits the collapsing character only in a moderate degree and the dilatation and hypertrophy of the heart are inconsiderable, the patient may be expected to enjoy life and do hard work for many years, provided the lesion is due to acute endocarditis," and not to syphilis or atheroma. In practically all such favourable cases the onset is before the age of 20.

Atheromatous cases arise so late in life that very little extra hypertrophy can be expected, and, unless specially guarded against, the high peripheral resistance, which was the main cause of the regurgitation, continues to act, and the atheroma progresses; the prognosis is therefore bad though the amount of regurgitation is not great.

When aortic stenosis supervenes in a case with considerable regurgitation, it improves the prognosis by lessening the amount of regurgitation. Dangerous symptoms will often disappear and the patient's life be much prolonged. When a valve ruptures, the strain put suddenly on the heart is too great, dilatation of the left ventricle is extreme, and hypertrophy never properly compensates. If there is dropsy the first thing to determine is whether it is due to mitral disease mainly, or to dilatation of the mitral orifice by the extent of the aortic regurgitation. If due to mitral disease the pulse will be irregular and not very large nor collapsing, and the second sound will be heard in the neck; the prognosis will be then rather better than when due to giving way of the mitral valve through the amount of aortic regurgitation.

Treatment.

Far the most important time for treatment is at the onset in rheumatic cases. Children with growing pains or a pain in any joint should always have their hearts examined; the onset of endocarditis is so insidious. During the acute stage salicin or aspirin given in full doses appears to be less depressing to the heart than salicylates. Small repeated blisters to the first, second, or third spaces on the left side, as recommended by Caton, are distinctly useful, as also is potassium iodide after the temperature has fallen. When the aortic valve is affected, rest in bed is essential, not only until the temperature comes down to normal, but for at least six weeks after, and then a very gradual return to being up all day, and no exercise or work should be allowed for six months or more. If so treated the murmur and all signs of the regurgitation will in rare instances completely disappear; I have seen this happen in a case recently. But when the regurgitation persists, as it usually does, compensation i attained with as little dilatation as possible, and so more reserve is left for future contingencies.

In syphilitic cases potassium iodide tends to prevent the increase of the lesion, and also does good by lowering the vascular tension. Atheromatous cases need tonics combined with measures to reduce the peripheral resistance.

In all cases tonics such as strychnine, arsenic, formates, ammonia, and bark are most useful, and belladonna if there is palpitation. The bowels should be kept regular, but no violent purgatives must be given because of the danger of fatal syncope. Flatulent distension of the stomach should be watched for and treated, since it may bring on angina pectoris earlier than need be. Whenever there are symptoms of cardiac distress, rest in bed for two weeks to a month should be ordered, and the getting up after this must be gradual. The patient ought also to be warned of the extreme danger of any sudden exertion. Hypodermic morphia is the best hypnotic if the nights are bad.

If venous congestion or dropsy come on, digitalis combined with vascular dilators and diuretics is useful until these symptoms have been got rid of. Then, if the mitral and tricuspid breakdown was due to the amount of the aortic regurgitation, the digitalis must be at once stopped, since it is a dangerous drug to use in aortic regurgitation. Bleeding is never safe, but a few leeches may sometimes help the digitalis when there is venous congestion. For angina pectoris the vascular dilators, spiritus ætheris nitrosi, trinitrin, or erythrol tetranitrate are needed regularly, and capsules of amyl nitrite should be carried in case of an attack coming on. Arsenic or phosphorus and tonics improve the condition of the heart muscle and lessen the tendency to attacks.

Brighton.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON TWO CASES OF CEREBRAL HÆMORRHAGE ASSOCIATED WITH ANÆSTHESIA.

BY H. P. FAIRLIE, M.B., CH.B. GLASG.,
ANÆSTHETIST TO THE GLASGOW ROYAL INFIRMARY.

CASE 1.—The patient, a man aged 23 years, a labourer, was admitted to the Glasgow Royal Infirmary on March 8th, 1910, as a result of a severe injury to his left arm, occasioned by being caught between the rollers of a machine, and resulting in the complete destruction of the skin from the shoulder to the wrist. To allow of grafting this he was anæsthetised on three occasions, on the first and last by myself, and on the second by the house surgeon. Physical examination before anæsthesia revealed nothing abnormal. On the first occasion (March 24th) anæsthesia was induced by gas and ether; after 10 minutes a change was made to chloroform, administered on Skinner's face-piece. There was no difficulty of any kind, the anæsthesia lasting 25 minutes. On the second occasion (April 1st), of which I have no detailed note, the house surgeon gave chloroform on Skinner's face-piece. After induction, during which there was some struggling, the respirations became shallow and stopped. Artificial respiration was commenced and continued for about one minute, after which natural respiration returned and remained good during the operation, five grafts being applied. On the third occasion (April 23rd) chloroform was administered on Skinner's face-piece. During the first stage there was considerable excitement, with violent struggling, followed in six minutes by unconsciousness, abolition of the corneal reflex, medium pupil, good breathing and pulse, with slight cyanosis. The patient was allowed four or five breaths of air, after which chloroform was again applied. At eight minutes the patient was turned on his right side to permit of grafts being taken from the outer side of his left thigh. His left arm hung over and slightly pressed on the chest. At this minute the breathing suddenly became interrupted and gasping, then ceased, with dilatation of the pupils, livid pallor, and almost imperceptible pulse. The patient was at once turned on his back, his head was lowered, his tongue pulled forward, and artificial respiration by Silvester's method commenced. By this time the pulse was quite imperceptible and the cardiac impulse could be neither felt nor heard. Hot-water cloths were applied to the præcordium, and 30 minims of brandy and 1/60th of a grain of strychnine were injected hypodermically, but with the exception of one or two gasping inspirations the patient gave no further indication of life. A post-mortem examination revealed the following conditions:—Heart: normal. Lungs: some engorgement at base; no œdema. Brain: fresh hæmorrhage extending over both cerebral hemispheres downwards towards the base, more extensive on the left side. There was no hypertrophy of the lymphatic tissue.

CASE 2.—The patient, a woman aged 61 years, was admitted to the Glasgow Royal Infirmary on May 12th, 1910, with a diagnosis of carcinoma of the cæcum. Although for some time before the admission she had been losing flesh she was still very stout. Physical examination before anæsthesia showed no abnormality, except rather feeble heart sounds, but no valvular lesion. On May 14th she was anæsthetised by Dr. A. Stewart, house surgeon, the anæsthetic chosen being chloroform administered on Skinner's mask. The first stage was quiet, but before the patient had entered the second stage preparation of the skin for the operation was commenced, causing slight straining of the abdominal muscles and holding of breath. After five minutes' administration, when about two drachms of chloroform had been given, difficulty arose. Respiration ceased, with cyanosis and weaker pulse. The usual methods of resuscitation were adopted, as in Case 1, with the exception of the injection of brandy, and after artificial respiration had been continued for about seven minutes respiration was resumed and the pulse improved in volume. An attempt was made to continue anæsthesia with ether by the open method, but this gave rise to the same alarming condition, though artificial respiration was not called for, and the patient was sent back to bed without operation. She kept well for three days, when it was noticed that there was slowness in answering questions, with delayed comprehension and slight mental dulness. Later in the day (May 17th) paralysis of the left arm developed, with slight drawing of the mouth to the right side, and unconsciousness. On the 18th, there was a slight return of consciousness, the patient being then able to answer questions, otherwise her condition remained the same. After this date there was no opportunity for further observation as the patient left the infirmary.

The above cases draw attention to the association of cerebral hæmorrhage with chloroform anæsthesia, which, judging from the absence of reference to it in the current literature on anæsthetics, seems to be of rare occurrence. Dr. F. W. Hewitt in his text-book on the subject mentions it as a concomitant of ether anæthesia, where, owing to the action of ether as a circulatory stimulant, and also to the frequent occurrence of some degree of venous stasis in the early stages of ether administration by the closed method, it is more liable to occur. In the first of the above cases, where apparently difficulty arose and death resulted from primary circulatory failure, it is difficult to explain the hæmorrhage unless by ascribing it to raised arterial tension and rupture of a vessel during the period of struggling. In the second case, on the other hand, there was no struggling, and here the origin of the difficulty seems to have been primarily respiratory, with venous engorgement, and possibly resulting rupture of a small vein.

Glasgow.

BREAKING-DOWN GUMMATA OF LIVER SIMULATING TROPICAL ABSCESS.

BY G. S. THOMPSON, M.R.C.S. ENG., L.R.C.P. LOND.

THE following case is, I think, worthy of record, exemplifying as it does the value of the rule of administering anti-syphilitic remedies in all hepatic conditions which prove intractable or irresponsive to measures already invoked.

The patient, a male, aged 25 years, had been suffering for six months with pyrexia, sweating, "chills," lassitude, malaise, and latterly cough accompanied by "anchovy sauce" expectoration. Pain was present at first in the epigastric region, and later over the lower posterior aspect of the right side of the chest. When seen the patient looked severely ill, presenting the hectic appearance. Physical examination revealed a considerable area of dulness over the region of the right side of the chest posteriorly and below, as well as unilateral impairment of movement and a few moist sounds at the base of the lung. The temperature chart was characteristic of pus absorption. History as to dysentery or typhoid fever was quite negative, but as subsequently elicited there was a history of soft chancre five years previously, for which no anti-specific treatment was given, since syphilis was not suspected or suggested.

From the above facts, notwithstanding the absence of history of dysenteric infection, there appeared to be no doubt in my mind that a liver abscess was present. The patient was accordingly sent into the Kimberley hospital, and after making several negative exploratory punctures with a needle under anæsthesia pus was finally reached, and the cavity was then drained through the post-scapular line. The wound discharged freely, but the temperature still remaining up another abscess was suspected; the latter was opened by way of the first wound. The temperature then fell, and the discharge became less and less until the dressings were merely moistened by serous exudate, and expectoration had ceased. The patient was now allowed up, but in a few days' time the temperature began to rise again—notwithstanding the fact that good drainage was permitted from the liver—and although the dressings remained clean characteristic sputum reappeared. A third abscess cavity was therefore suspected and an endeavour was made to evacuate it through the wound. The expectoration continued, however, in abundance, and the prolonged persistence (about six or eight weeks) of the discharge again through both passages began to give rather a hopeless prospect for recovery.

In order to facilitate drainage through the lung the foot of the bed was now well elevated, and at the same time iodide

predominates, mitral stenosis is not infrequent, but even then a presystolic murmur is not always heard. I remember one case where post mortem there were mitral and tricuspid stenosis as well as aortic stenosis, with some regurgitation, but no presystolic murmur was heard during the two months she was in hospital, but the first sound at the apex was short and loud.

Thayer, at the Johns Hopkins Hospital in 1901, found in 74 cases of aortic regurgitation followed by post-mortem examination 45 had had a presystolic murmur during life, but in only 12 was there any mitral stenosis, and in these the pulse was noted as not large, and in most of them there was a short loud snapping first sound at the apex. But of the 29 with no presystolic murmur 4 had mitral stenosis. He illustrates the difficulty of diagnosis by a percentage table of physical signs, and concludes that the size of the pulse is the most reliable guide.

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The pulse is sometimes bisferiens; a distinct double beat may be felt when moderate pressure is put on the artery. In a tracing there is a double top to the wave, the second being higher than the first. This is often only present on the left side, while the right pulse is normal, and it is, I believe, invariably more marked on the left side. Some aortic stenosis or high peripheral resistance has been present in all the fully described cases. Roy and Adami, in their investigations on the hearts of dogs in 1890, found that a rise of peripheral resistance made the intra-ventricular pressure curve anacrotic, as if the contraction were reinforced by a renewed effort. It is probable, therefore, that in cases of aortic regurgitation with stenosis supervening the intra-ventricular pressure curve would be anacrotic, and, if the valves are much destroyed, the pressure curve in the aorta would correspond closely to the intra-ventricular, and an anacrotic or bisferiens pulse might be conveyed to the arteries. The explanation of the bisferiens pulse being more marked in the left carotid and radial is that the natural direction of the main blood stream is towards the left carotid (a fact often quoted as the cause of the greater frequency of cerebral embolism on the left side), and so the pressure curve of the aorta is more readily conveyed.

To estimate the amount of regurgitation the pulse is the most important factor. A large artery and very collapsing pulse, when the wrist is held above the level of the shoulder, indicate much regurgitation, and *vice versâ*. But if the pulse is irregular proper compensation has not been attained, and there is more regurgitation than the pulse shows. In the last stages there may also not be sufficient force in the heart to produce a collapsing pulse at all. In atheromatous regurgitation the artery is large and tortuous from long-standing high tension, but there is not the same collapse of the pulse; sphygmographic tracings show a more sustained wave, and the amount of regurgitation is never very great.

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Prognosis.

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If venous congestion or dropsy come on, digitalis combined with vascular dilators and diuretics is useful until these symptoms have been got rid of. Then, if the mitral and tricuspid breakdown was due to the amount of the aortic regurgitation, the digitalis must be at once stopped, since it is a dangerous drug to use in aortic regurgitation. Bleeding is never safe, but a few leeches may sometimes help the digitalis when there is venous congestion. For angina pectoris the vascular dilators, spiritus ætheris nitrosi, trinitrin, or erythrol tetranitrate are needed regularly, and capsules of amyl nitrite should be carried in case of an attack coming on. Arsenic or phosphorus and tonics improve the condition of the heart muscle and lessen the tendency to attacks.

Brighton.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON TWO CASES OF CEREBRAL HÆMORRHAGE ASSOCIATED WITH ANÆSTHESIA.

BY H. P. FAIRLIE, M.B., CH.B. GLASG.,
ANÆSTHETIST TO THE GLASGOW ROYAL INFIRMARY.

CASE 1.—The patient, a man aged 23 years, a labourer, was admitted to the Glasgow Royal Infirmary on March 8th, 1910, as a result of a severe injury to his left arm, occasioned by being caught between the rollers of a machine, and resulting in the complete destruction of the skin from the shoulder to the wrist. To allow of grafting this he was anæsthetised on three occasions, on the first and last by myself, and on the second by the house surgeon. Physical examination before anæsthesia revealed nothing abnormal. On the first occasion (March 24th) anæsthesia was induced by gas and ether; after 10 minutes a change was made to chloroform, administered on Skinner's face-piece. There was no difficulty of any kind, the anæsthesia lasting 25 minutes. On the second occasion (April 1st), of which I have no detailed note, the house surgeon gave chloroform on Skinner's face-piece. After induction, during which there was some struggling, the respirations became shallow and stopped. Artificial respiration was commenced and continued for about one minute, after which natural respiration returned and remained good during the operation, five grafts being applied. On the third occasion (April 23rd) chloroform was administered on Skinner's face-piece. During the first stage there was considerable excitement, with violent struggling, followed in six minutes by unconsciousness, abolition of the corneal reflex, medium pupil, good breathing and pulse, with slight cyanosis. The patient was allowed four or five breaths of air, after which chloroform was again applied. At eight minutes the patient was turned on his right side to permit of grafts being taken from the outer side of his left thigh. His left arm hung over and slightly pressed on the chest. At this minute the breathing suddenly became interrupted and gasping, then ceased, with dilatation of the pupils, livid pallor, and almost imperceptible pulse. The patient was at once turned on his back, his head was lowered, his tongue pulled forward, and artificial respiration by Silvester's method commenced. By this time the pulse was quite imperceptible and the cardiac impulse could be neither felt nor heard. Hot-water cloths were applied to the præcordium, and 30 minims of brandy and 1/60th of a grain of strychnine were injected hypodermically, but with the exception of one or two gasping inspirations the patient gave no further indication of life. A post-mortem examination revealed the following conditions:—Heart: normal. Lungs: some engorgement at base; no œdema. Brain: fresh hæmorrhage extending over both cerebral hemispheres downwards towards the base, more extensive on the left side. There was no hypertrophy of the lymphatic tissue.

CASE 2.—The patient, a woman aged 61 years, was admitted to the Glasgow Royal Infirmary on May 12th, 1910, with a diagnosis of carcinoma of the cæcum. Although for some time before the admission she had been losing flesh she was still very stout. Physical examination before anæsthesia showed no abnormality, except rather feeble heart sounds, but no valvular lesion. On May 14th she was anæsthetised by Dr. A. Stewart, house surgeon, the anæsthetic chosen being chloroform administered on Skinner's mask. The first stage was quiet, but before the patient had entered the second stage preparation of the skin for the operation was commenced, causing slight straining of the abdominal muscles and holding of breath. After five minutes' administration, when about two drachms of chloroform had been given, difficulty arose. Respiration ceased, with cyanosis and weaker pulse. The usual methods of resuscitation were adopted, as in Case 1, with the exception of the injection of brandy, and after artificial respiration had been continued for about seven minutes respiration was resumed and the pulse improved in volume. An attempt was made to continue anæsthesia with ether by the open method, but this gave rise to the same alarming condition, though artificial respiration was not called for, and the patient was sent back to bed without operation. She kept well for three days, when it was noticed that there was slowness in answering questions, with delayed comprehension and slight mental dulness. Later in the day (May 17th) paralysis of the left arm developed, with slight drawing of the mouth to the right side, and unconsciousness. On the 18th, there was a slight return of consciousness, the patient being then able to answer questions, otherwise her condition remained the same. After this date there was no opportunity for further observation as the patient left the infirmary.

The above cases draw attention to the association of cerebral hæmorrhage with chloroform anæsthesia, which, judging from the absence of reference to it in the current literature on anæsthetics, seems to be of rare occurrence. Dr. F. W. Hewitt in his text-book on the subject mentions it as a concomitant of ether anæthesia, where, owing to the action of ether as a circulatory stimulant, and also to the frequent occurrence of some degree of venous stasis in the early stages of ether administration by the closed method, it is more liable to occur. In the first of the above cases, where apparently difficulty arose and death resulted from primary circulatory failure, it is difficult to explain the hæmorrhage unless by ascribing it to raised arterial tension and rupture of a vessel during the period of struggling. In the second case, on the other hand, there was no struggling, and here the origin of the difficulty seems to have been primarily respiratory, with venous engorgement, and possibly resulting rupture of a small vein.

Glasgow.

BREAKING-DOWN GUMMATA OF LIVER SIMULATING TROPICAL ABSCESS.

BY G. S. THOMPSON, M.R.C.S. ENG., L.R.C.P. LOND.

THE following case is, I think, worthy of record, exemplifying as it does the value of the rule of administering anti-syphilitic remedies in all hepatic conditions which prove intractable or irresponsive to measures already invoked.

The patient, a male, aged 25 years, had been suffering for six months with pyrexia, sweating, "chills," lassitude, malaise, and latterly cough accompanied by "anchovy sauce" expectoration. Pain was present at first in the epigastric region, and later over the lower posterior aspect of the right side of the chest. When seen the patient looked severely ill, presenting the hectic appearance. Physical examination revealed a considerable area of dulness over the region of the right side of the chest posteriorly and below, as well as unilateral impairment of movement and a few moist sounds at the base of the lung. The temperature chart was characteristic of pus absorption. History as to dysentery or typhoid fever was quite negative, but as subsequently elicited there was a history of soft chancre five years previously, for which no anti-specific treatment was given, since syphilis was not suspected or suggested.

From the above facts, notwithstanding the absence of history of dysenteric infection, there appeared to be no doubt in my mind that a liver abscess was present. The patient was accordingly sent into the Kimberley hospital, and after making several negative exploratory punctures with a needle under anæsthesia pus was finally reached, and the cavity was then drained through the post-scapular line. The wound discharged freely, but the temperature still remaining up another abscess was suspected; the latter was opened by way of the first wound. The temperature then fell, and the discharge became less and less until the dressings were merely moistened by serous exudate, and expectoration had ceased. The patient was now allowed up, but in a few days' time the temperature began to rise again—notwithstanding the fact that good drainage was permitted from the liver—and although the dressings remained clean characteristic sputum reappeared. A third abscess cavity was therefore suspected and an endeavour was made to evacuate it through the wound. The expectoration continued, however, in abundance, and the prolonged persistence (about six or eight weeks) of the discharge again through both passages began to give rather a hopeless prospect for recovery.

In order to facilitate drainage through the lung the foot of the bed was now well elevated, and at the same time iodide

of potassium was administered. The result was striking and gratifying; in three days the sputum as well as the wound discharge began markedly to lessen in amount, and in a week's time both had ceased. This happy state of affairs persisted from that time onwards. The patient, after being in hospital over three months, was discharged quite well, and is now doing his work and feels like a normal individual again. He is also undergoing a course of anti-syphilitic treatment.

The following comments I think are justified by the above. The only thing that at all militated against the diagnosis of tropical abscess was the absence of a history of dysentery or typhoid fever, whilst the negative specific history (interrogation on which point, by the way, was hardly suggested by the condition) tended to mislead. The contents of the cavities were typically those of tropical liver abscesses. Yet it would appear that the lesions were breaking-down gummata of the liver. In favour of this view are the persistence, multiplicity, fresh deposits, and the response to iodide, for I have little doubt that the exhibition of this drug determined the related rapid change. The interesting feature is the striking simulation by tertiary syphilomatous liver disease to tropical abscess, if the above deduction be correct. I suggest the necessity of keeping this point in view in unprogressive cases, and even acting upon it previous to subjecting patients to operation; and the advisability in any case at least of giving iodide of potassium a trial in all liver diseases where other means fail, or before giving up hope.

St. Mary's Hospital, London, W.

NOTES ON A CASE OF INFECTION OF THE BASE OF THE BRAIN FROM A CARIOUS TOOTH.

By S. W. MILNER, M.R.C.S. Eng.

THE patient was a married woman, aged 36 years, and had been healthy. On April 28th, 1910, she developed a "gumboil" from a decayed tooth in the left lower jaw and had neuralgia on the left side of the head. On April 30th and May 1st she had pain in the left temple and back of the head and also in both eyes and took to her bed. On May 3rd she called in a medical man, and he was in attendance until the 11th, when she was admitted to Gravesend Hospital. On the 4th when in bed she had "violent shaking." The right ear had always been rather deaf, but it was noticed that the deafness had become worse. On the 6th there was "swelling" of the right eye. On the 8th there was some delirium and the temperature rose to 106° F. On the 9th there was "swelling" of the left eye. On the 11th she was admitted to hospital.

On arrival at hospital she was conscious but exhausted and answered questions clearly, although very deaf. It was noticed that the right ear was totally deaf. With the left ear a loud ticking watch was heard at three inches distance. The right side of the face was paralysed. There was loss of sensation in the left side of the face. Both eyes were prominent, the right the more so, and both lids were red and swollen. The right pupil was dilated. Vision in the right eye was reduced to perception of light. The patient took fluid food readily. The temperature was 104° F. and pulse 106. There was a sensation of "something going round and round" in the head. The patient had very little sleep. The pulse remained good and there was no vomiting. There was a purulent discharge from both conjunctivæ. On the following day (May 12th) she had a rigor at 11 A.M., when the temperature rose to 105·6°. This was followed by delirium and restlessness. She took milk well. She was sleepless and delirious all night and at 3.30 A.M. became very collapsed. On May 13th the morning temperature was 101·2°, pulse 82, and respiration 40. She was delirious all day and vomited twice. She slept at intervals and perspired freely. She had no sleep at night and was delirious. She vomited green fluid three times and at 7.5 A.M. was very collapsed. She did not recover and died at 8.30 A.M.

A post-mortem examination was made. On opening the skull and removing the dura mater great engorgement of the vessels was noted. The membranes on the base of the brain from the optic chiasma in front to the under surface of the cerebellum behind and spreading laterally to the under surface of each temporo-sphenoidal lobe were green and necrotic and putrefying. On stripping off this membrane and the vessels the brain substance was normal in appearance and nothing abnormal was found on slicing the various parts of the brain. The dura mater was next removed from the base of the skull and the structures passing through the various foramina were examined. The left Gasserian ganglion was necrotic, as were the nerves leaving it. The right ganglion was healthy. The pituitary body was necrotic. The body of the sphenoid and both petrous bones were partially necrosed and greatly congested on section. In neither internal ear was pus found. The circular sinus and cavernous sinuses were thrombosed. There was pus in both orbits under the fibres of the levator palpebræ superioris. On pulling on the left inferior maxillary nerve as it left the skull through the foramen ovale pus was seen coming up around the nerve, and a probe passed easily along the nerve and beneath the mucous membrane of the left cheek—this being no doubt the track of the original infection from the tooth to the brain.

Gravesend Hospital.

Medical Societies.

HARVEIAN SOCIETY OF LONDON.

Diagnosis and Treatment of Cystic Disease of the Breast.

A MEETING of this society was held on Oct. 27th, Dr. M. HANDFIELD-JONES, the President, being in the chair.

Mr. D'ARCY POWER opened a discussion on the Diagnosis and Treatment of Cystic Disease of the Breast by drawing attention to the difficulty which he had often experienced in diagnosing and treating cystic tumours of the breast. He stated that the classification of cystic disease was chaotic at the present time and offered for consideration the following scheme:—

(*A*) *Non-Inflammatory.*

(*a*) Innocent ... (1) Adenoma ... ... (i.) Ducts. (ii.) Acini.
(2) Fibroma... ... ... (i.) Pericanalicular. (ii.) Intracanalicular.

(*b*) Malignant ... (1) Carcinoma ... ... (i.) Duct papilloma. (ii.) Duct carcinoma.
(2) Sarcoma... ... ... (i.) Cystic. (ii.) Degenerating.

(*B*) *Inflammatory.*

(i.) Galactocele ... (1) Cyst single and simple.
(ii.) Mastitis ... (2) Cysts multiple.

(*C*) *Congenital*.... ... Lymphangioma.

(*D*) *Parasitic* ... ... Hydatid.

Cystic adenomata were well recognised tumours of the breast and called for little comment. Mr. Power gave short notes of two cases, and pointed out that in removing the tumour it was necessary to cut clean through the overlying breast tissue before any attempt was made to enucleate the adenoma. He thought that it was not necessary to remove every adenoma of the breast. Cystic fibroma of the breast, or Brodie's disease of the breast, occurred in an innocent form—cystic fibroma—and in a malignant form—cystic sarcoma. The innocent cystic fibroma of the breast was characterised by an overgrowth of connective tissue starting in the stroma round the ducts and acini—the pericanalicular form—or in the subepithelial tissue of the ducts themselves—the intracanalicular variety. Both tumours were associated with the formation of numerous cysts filled at first with clear serous fluid. The cysts were therefore due to obstruction of the glandular tissue, although in some cases there was microscopical evidence that the glandular epithelium had itself undergone cystic degeneration. The cyst wall in the pericanalicular form was often invaginated by the new growth of fibrous tissue until the cyst became a mere slit, and on section the tumour seemed to be solid until a probe was passed into the slits, when the invaginating growth could be turned out and the cyst demonstrated. In the intracanalicular form the cysts remained obvious and the growth sprouted into it as "a duct papilloma." Mr. Power illustrated his remarks by cases, and then went on to show that secondary changes might take place in the connective tissue of stroma of intracanalicular cystic disease. Malignant cystic disease of the breast attacked the same parts as cystic fibroma. It occurred in the forms of cystic sarcoma and duct cancer—the sarcoma corresponding with pericanalicular cystic fibroma and duct cancer being the correlative of the intracanalicular form. Cystic sarcoma was

at first a well-circumscribed swelling which grew like sarcomata in other parts of the body. The cysts were constituent parts of the growth and were not degeneration products. A case was given in illustration. Cystic sarcomata of the breast were to be distinguished from sarcomata in which the cysts were produced by degenerative changes. Duct carcinoma was always cystic, the cysts being either simple or multilocular. Mr. Power gave an example of the multilocular cystic form which had been recently under his care. Cystic disease of the breast connected more or less directly with inflammatory changes were of greater diagnostic interest and presented greater difficulties in treatment than the non-inflammatory forms which had just been considered. Foremost amongst these, and in many ways the simplest, was galactocele. It was generally the result of inflammatory changes occurring in the breasts of married women. Mr. Power gave the details of a case where it had followed an injury in a virgin breast. Chronic mastitis lead to the formation of a most interesting group of cystic tumours. The cyst in these cases might be single and simple, or the whole gland might present the appearance of a sponge when it was examined after removal. The single and simple cyst was sometimes placed so deeply or had so thick a wall that it was mistaken for a solid tumour, and every pathological museum contained examples of such cysts where the entire breast had been removed under the misapprehension of the existence of cancer. It was a cardinal rule, therefore, to incise every breast before amputation was performed, and incision was always preferable to puncture, because mere puncture might lead to an intra-cystic growth being overlooked. The most difficult cases to treat were those in which there were many small cysts the results of chronic lobular mastitis. Mr. Power read the notes of such which had lasted several years affecting first one breast and then the other. He concluded his paper with a brief reference to congenital cysts of the breast which he considered to be of the nature of lymphangioma.

Mr. E. H. SHAW agreed with Mr. Power as to the unsatisfactory nature of the classification of breast cysts, but did not think Mr. Power's proposed classification was quite suitable. He had tried to work out a simple scheme which would include all the cysts and at the same time retain most of the names at present used. It was as follows:—

I. Inflammatory.

A. Abscess	(*a*) Acute. (*b*) Chronic (as tubercle).
B. Retention	(*a*) Galactocele. (*b*) Serous, or simple.

II. Non-inflammatory.

A. With intra-cystic growths	(*a*) Adenoma. (*b*) Papilloma (or so-called duct papilloma). (*c*) Carcinoma. (*d*) Fibroma (intra-cystic fibro-adenoma). (*e*) Myxo-fibroma. (*f*) Sarcoma (intra-cystic adeno-sarcoma).
B. "Breaking down" of new growths	(*a*) Carcinoma. (*b*) Sarcoma.
C. Parasitic	(*a*) Hydatid.

Mr. Shaw showed a series of photographic lantern slides illustrating the naked-eye and microscopic appearances of most of the above cysts. He had time only to enter into a detailed description of the serous or simple cysts, and expressed his belief that all these cysts arose in connexion with chronic mastitis; they were retention cysts. He demonstrated the gradual thinning of the lining epithelium and also the thickening and proliferation of cells which occurred in some of the breast acini. He did not believe there was such a condition as a lymphatic cyst of the mammary gland. He was strongly against puncture of the cysts for diagnosis and treatment, and showed specimens of carcinoma in the walls of such cysts. He pointed out that the so-called "duct" papillomata were also found in dilated acini, and preferred the term "intra-cystic papilloma." In many cases the tumours were really solid adenomata projecting into a cyst, and should be termed intra-cystic adenoma.

Mr. W. G. SPENCER said he first wished to thank the Harveian Society for the honour it had done him by an invitation as a visitor to take part in this discussion, and then offered his hearty congratulations to Mr. Power upon his excellent description of the pathological anatomy of the cystic tumours of the breast, so well supplemented by Mr. Shaw's demonstration of the histological appearances. He felt unable to enter upon questions of classification, for so little was known as to the causes of pathological development of these growths. It was so difficult to attach any precise meaning to the term "inflammatory" except in the condition where one could connect the cause with some micro-organism. When so-called inflammatory conditions were noted as preceding cancer there must be some peculiarity as distinguished from the inflammatory effects produced by known micro-organisms. Moreover, the word "serous" was applied to the contents of many sorts of cysts, whereas in only a few could the contents correspond to physiological blood serum. Thirdly, Mr. Spencer recalled that Kanthack termed papillomas connective-tissue tumours, viewing the stroma as the main feature of the growth. That view had been regarded as heretical, yet many of the intra-cystic growths referred to as papillomatous appeared to be chiefly composed of a connective tissue stroma. One could hardly limit one's view to these cystic tumours which had proved non-malignant, but must consider alongside them the number of cases of carcinoma which had at first been regarded clinically as benign. When cut out early enough for some breast tissue to persist outside the cancer there were changes to be found in that breast tissue like those present in benign tumours. Turning to the practical side of the matter, a puncture of a cyst, followed or not by injection, was often adopted, and the patients were said to have been relieved. But in how many instances were they cured? Were they seen later with advanced disease? Mr. Spencer did not feel sure that the practice was really justified by results; the cases should be very carefully watched after the puncturing. Mr. Power had referred to recurring forms of chronic mastitis. How long should they advise a woman to put up with it? One could not state with certainty whether she would be cured by waiting. Even although there were no signs of advancing disease at the moment, they could not exclude the possibility that new growth might ultimately ensue. Therefore he did not think that they should treat recurring mastitis for longer than a few months, after which time excision should be advised. In the case of circumscribed cystic tumours he was sure that it was wise to remove also a zone of the apparently healthy breast tissue around. Hence the words "enucleation" or "shelling out" did not express all that should be done. Even although the main tumour be circumscribed, if there was some definite change from the normal in the breast tissue around it, as seen with the naked eye, he would advise excision of the whole breast. The nipple could be left as Mr. Power had mentioned.

Mr. T. CRISP ENGLISH said that mammary cysts were almost always secondary to mastitis, or some other local disease, and that recognition of the primary condition was of essential importance; an exploratory incision should therefore be made in all doubtful cases. In cystic mastitis it was usually possible to excise the cyst-bearing area through a transverse incision below the nipple about two inches in length; this procedure left comparatively little deformity, and the results were excellent. He did not believe that the ordinary form of cystic mastitis involved any special predisposition to malignant disease.

Mr. G. E. GASK said that he thought a classification of cystic tumours was badly wanted, and that the reason of the present confusion of terms lay in the misunderstanding concerning the histology of the intra-cystic growths. These were nearly always due to protrusion of the stroma or interstitial tissue into the cavity of the cyst and not epithelial growth, and this stroma might be fibrous tissue or fibrous tissue showing myxomatous or sarcomatous degeneration, hence the confusion as to the meaning of "Brodie's disease." As regards mastitis with cyst formation Mr. Gask thought that whenever the condition called for surgical treatment the whole breast should be removed, because, in his experience, a partial excision did not free the patient from neuralgic pain, and often further operation was required, and, moreover, certain cases were followed by the appearance of a carcinoma.

Mr. W. H. CLAYTON-GREENE said he should like to add his thanks to Mr. Power for his valuable paper. He thought the description of the cyst with the different forms of intra-cystic growth was a very clear one. He should, however, like to ask Mr. Power which he considered the primary change, the cyst or the growth. He asked Dr.

Spilsbury about it that afternoon, who told him that he thought the connective tissue growth was the initial stage, a growth which led to a retention cyst in the acinus. Also he would ask if Mr. Power would allow the possibility of these neoplasms having an inflammatory origin. Mr. Clayton-Greene had often been struck with the histological similarity between the adenomata and fibromata and interstitial mastitis acknowledged to be of inflammatory origin, only in the former a small area of the breast was attacked, in the latter the whole organ. With regard to the removal of these simple tumours Mr. Clayton-Greene would agree with Mr. Spencer that it was always wise to cut them out clearly with a little of the surrounding tissue. If enucleated they sometimes recurred, and he had seen instances where they had turned out to be spindle-celled sarcomata, the "recurrent fibroid of Paget." It was often very difficult to tell from a section whether a sarcomatous change was or was not occurring in the stroma. With regard to general cystic disease and interstitial mastitis Mr. Clayton-Greene would touch on one point that had been raised—their relation to malignant disease. Some of the speakers regarded the condition as precancerous, a view which was held by the American surgeons, who associated the development of the adeno-carcinoma with this diseased condition of the mammæ. Reclus, on the other hand, denied the relationship, and treated the cysts by puncture and injection. It seemed as if they had two classes of case—one with large cysts, two or three, as a rule, which were rarely associated with a malignant change, and the other where the whole breast was riddled with cysts, and was shrunken and atrophied. The former he had not regarded as dangerous, but from what he had heard and seen that night he was inclined to alter his opinion. The latter, he thought, should be dealt with surgically by the method described by Mr. Power, by turning up a flap and dissecting away the breast tissue from the skin and nipple, which were then replaced. Both breasts usually suffered, though not necessarily at the same time. Mr. Clayton-Greene would like to ask Mr. Power if he had any experience of the cancer cysts described by the American surgeons—cysts with a thick wall containing blood, apparently a very malignant type judging by the reported cases. He had had one case himself this year. He entirely agreed with the need for exploratory incision in a doubtful case. With ordinary care there should be no risk of cancer cell infection, the whole mass could be cut out clean and then submitted to careful examination. He was often doubtful of the nature of a breast tumour, and he should reproach himself bitterly if he performed the modern operation for the removal of a malignant breast for a condition which did not require it. It was a very big operation—one of the largest in surgery. He was delighted to hear that the serous cyst did not exist. Its existence had been taken for granted by text-book after text-book, and it appeared to be merely a name given to a cyst from the character of the fluid, and owing to the fact that the epithelial lining had been destroyed in the preparation of the specimen. He had long looked for an example. He should do so no more. The serous cyst was dead; might it be decently interred under this mass of pathological evidence.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

The Significance of Vertigo.

A MEETING of this society took place at the Great Northern Central Hospital on Oct. 13th. In the absence of the President, Dr. T. J. Horder, the chair was taken by Dr. C. M. HINDS HOWELL.

The session was opened with an address by Dr. J. S. RISIEN RUSSELL on the Significance of Vertigo. He said that in the choice of a subject for the address he had been largely influenced by two considerations: one of these was that he supposed that his audience would be chiefly composed of men actively engaged in practice, who would be more likely to welcome something practical that might be of some immediate use to them in their work, rather than listen to a discourse which, although possibly brimming over with interest from the scientific standpoint, could not be said to offer anything that could be of practical value now, no matter what the possibilities for the future might be. The other reason that had guided him in the choice of vertigo was that he had seen so many patients suffering in this way in whom he believed that a wrong construction had been put on the case merely because the blood pressure happened to be high. Enough account had not been taken of the fact that such blood-vessels as lent themselves to palpation did not reveal abnormal thickening, that the retinal vessels were equally free from signs of sclerosis, as viewed by the aid of the opthalmoscope; that analysis of the urine failed to throw suspicion on the kidneys, or that the individual was of highly nervous temperament and not a little perturbed by the alarming sensations occasioned by the vertiginous seizures. An unduly hasty diagnosis of impending apoplexy was apt to lead to the patient being terrorised, purged, and dieted into a condition of nervous prostration that ultimately made him a fit subject for a "rest cure." He was far from wishing to belittle the importance either of vertigo or high blood pressure as evidence of arterial sclerosis and as warnings of impending calamities in the way of gross vascular lesions of the brain, but he felt sure that many people were doomed to a fate of the kind on insufficient data. A case was quoted, in illustration, in which the patient had received the grave verdict of impending apoplexy, and in which he had been treated into a condition of nervous prostration, when in reality the vertigo in his case was aural in origin. Some of the cases of "apoplectiform" labyrinthine vertigo were very alarming in their manifestations, and it was not surprising that they occasioned fear of more serious mischief. In this connexion he quoted a case of the kind in which cerebellar hæmorrhage had been suspected, but in which he was confident of his opinion to the contrary, which was confirmed by the subsequent progress of the case. This afforded him the opportunity of alluding to the fact that although vascular lesions of the cerebrum were so common they were comparatively rare in the cerebellum, a reason that should cause some hesitation before too confident a diagnosis of cerebellar hæmorrhage was made.

In his experience aural vertigo and neurasthenia were the two conditions, one or other, or both of which had obtained in cases in which arterio-sclerosis of the cerebral vessels with threatened apoplexy had been the unjustified diagnosis. Although the acute apoplectiform variety was rare, it was, of course, common to meet with the chronic slowly progressive forms of aural vertigo. The diagnosis was often made the more difficult owing to the fact that a certain amount of fulness in the head might be complained of, especially on the affected side, and all of the symptoms were influenced by changes of the position of the head. Moreover, evidences of arterio-sclerosis might be forthcoming owing to the fact that the aural condition was most common in persons who had reached the degenerative period of life in which arterial sclerosis was also most likely to be met with. It not uncommonly happened that a varying amount of neurasthenia became added, which was responsible for aggravation of all the symptoms. Neurasthenia alone might similarly occasion vertigo and a variety of cephalic sensations readily mistaken for those that result from arterio-sclerosis of the cerebral vessels, from which condition diagnosis might not be easy when the person affected had reached the degenerative period of life, and in view of the further fact that, as in arterio-sclerosis, posture might have a very notable effect on the sensations. The importance of vertigo as a symptom in epilepsy was next dealt with, and emphasis was laid on the difficulties that might arise in attempts to decide between epilepsy and aural vertigo, notably in some of those cases in which the patient was hurled to the ground with such suddenness in aural vertigo as to make him temporarily dazed, and thus made them uncertain in regard to one of the signs on which they placed most reliance in the differential diagnosis—viz., loss of consciousness in epilepsy as contrasted with its preservation in aural vertigo.

In dealing with cerebellar disease he showed how difficulties might arise where the diagnosis of abscess of the cerebellum was under discussion, owing to the similarity in the symptoms that might be manifest as a consequence of aural suppuration and its immediate consequences, short of suppuration in the cerebellum. The clinical phenomena on which a diagnosis must be based, led him to refer to the experimental researches that had supplied evidence of many of the signs that should be looked for when they were in search for cerebellar disease. The singular absence of many of these signs in recorded cases of cerebellar abscess was commented on, and while allowing for the possibilities of

compensation as revealed by the results of experimental ablation and of congenital defects of the organ, he could not help attributing some of the paucity of signs in these cases to a want of special knowledge on the part of the surgeon under whose care they most commonly came.

In discussing tumours of the cerebellum in relation to vertigo, he not only dealt with the physical signs that would justify a diagnosis of this kind, but also took the opportunity of drawing attention to the work of two of his colleagues (Grainger Stewart and Gordon Holmes) that had done so much in assisting them to decide whether the symptoms were due to an extra- or intra-cerebellar tumour. The number of cases that had come under his observation in which cerebellar tumour and disseminated sclerosis had been mistaken for each other compelled him to contrast the clinical pictures of these two affections, and in so doing he could not too strongly emphasise in support of tumour the importance of severe paroxysmal headache, vomiting, optic neuritis with choked disc, as contrasted with retro-bulbar neuritis, the absence of evidence of affection of the pyramidal tracts, objective defect of sensibility, and sphincter affection, all of which formed such important positives in disseminated sclerosis. In illustration of the confusion that might arise in diagnosis, a case in point was quoted where disseminated sclerosis had been suspected and in which an extracerebellar tumour was in reality responsible for the symptoms, a diagnosis that was confirmed by operation. By the aid of a lantern demonstration he was able to show how it happened that disseminated sclerosis might be responsible for the most intense vertigo as well as ataxy, owing to the distribution of the lesions; whereas affections like subacute combined degeneration of the cord, tabes, and Friedreich's ataxy, all of them liable to be confounded from the clinical standpoint with disseminated sclerosis, though responsible for ataxy, did not number vertigo amongst their symptoms. In dealing with conditions outside the nervous system responsible for vertigo he referred to a case of aortic regurgitation, in which headache and vomiting were supposed to be of gastric origin, but impairment of hearing in one ear, inability to move the head, or to turn the eyes much less the head to one side, associated, further, with pronounced nystagmus, greatly intensified by all such attempts at movement, left no room for doubt that the cause of the vertigo was central, if he might be permitted to include the labyrinth in this term. The case afforded an illustration of how impossible it might be to arrive at a positive diagnosis of the pathological lesion no matter how certain they might be of its localisation, for although tumour of the cerebellum was the diagnosis that had been arrived at by one distinguished authority who had seen the case, he was unable to reconcile this diagnosis with the facts. Headache had never been a notable symptom, and certainly nothing like that to be expected in tumour; there had never been the slightest suspicion of optic neuritis, although the case had continued for a long time; apart from the impairment of hearing and the nystagmus none of the cranial nerves were affected; and, what was even more than ever significant, the symptoms and manifestations, including tremor of the hand, had varied in a way that should suggest disseminated sclerosis rather than tumour. As against the latter diagnosis, however, were the age of the patient, well beyond that at which disseminated sclerosis was expected to begin, the complete absence of any evidence of affection of the pyramidal tracts, the absence of subjective or objective sensory defects in the limbs, and the absence of any disturbance in the action of the sphincter of the bladder.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.—Epithelioma of the Tongue.—Recurrent Enlargement of the Salivary Glands.—Fungus Affections of the Finger Nails.

THE first ordinary meeting of the ninetieth session of this society was held on Nov. 2nd, Dr. BYROM BRAMWELL, the President, being in the chair. The following were elected for the ensuing session: President, Dr. Byrom Bramwell; vice-presidents, Dr. W. Allan Jamieson, Mr. J. M. Cotterill, and Mr. C. W. Cathcart; councillors, Dr. James Ritchie, Dr. J. S. Fowler, Dr. John Cumming, Dr T. J. Thyne, Dr. Edwin Bramwell, Dr. R. J. Johnston, Mr. David Wallace, and Mr. J. W. Struthers; treasurer, Mr. J. W. Dowden; secretaries, Dr. Francis D. Boyd and Mr. Alexander Miles; and editor of Transactions, Dr. D. Chalmers Watson.

Dr. ALEXANDER BRUCE and Mr. J. M. COTTERILL exhibited a girl, aged about 10 years, with Acquired Hydrocephalus, cured by opening the foramen of Magendie. The girl had had acute post-basal meningitis in August, 1908, followed by recurrent severe headaches, vomiting, gradual impairment of sight, and optic neuritis. The left abdominal reflexes became abolished. There were recurring losses of control of the bowels and bladder, then extreme weakness, first of the left, then of the right leg. The stuporose condition increased, with complete blindness and separation of the sutures through distension of the brain ventricles. Mr. Cotterill at first punctured the lateral ventricles through the right coronal suture and drew off from four to five ounces of fluid, but without benefit. Then a large part of the occipital bone was removed and the foramen of Magendie, which had been closed by fibrous tissue, was reopened. The result was gradual, and practically complete recovery of motor power, sight, intelligence, and control of reflexes ensued.

Mr. ALEXANDER MILES showed a man, aged 60 years, after removal of the Gasserian Ganglion for Trigeminal Neuralgia. At the ages of 16 and 50 years he had suffered from similar attacks. The one for which he was operated on had lasted five years but was gradually getting worse, and for two years he had been unable to work. He presented a typical picture of tic douloureux. Besides the usual there were many extra points of extreme tenderness. The operation was done on June 17th, 1910, and the Gasserian ganglion with the second and third divisions of the trigeminal nerve was removed by a modified Hartley-Krause operation. The relief of pain was immediate and lasting.

Dr. FRANCIS D. BOYD exhibited a woman after Cerebro-Spinal Meningitis possibly of tuberculous origin. During the meningitis the patient lay comatose and squinting, with head retracted, vomiting, and early optic neuritis. On spinal puncture the fluid was found to be purulent. Von Pirquet's reaction was positive; no micro-organisms were found in the cerebro-spinal fluid. Treatment consisted in repeated lumbar puncture with 1 per cent. collargol injections into the cerebro-spinal canal, and the patient had made an excellent recovery.

Dr. BYROM BRAMWELL showed a case for diagnosis. It was that of a man aged 20 years, a painter, with no history of plumbism; the family history was good. The disease had gradually progressed during the past year. Both legs were now very weak, as also was the left arm; the small muscles of the feet, hands, forearms, deltoids, &c., were atrophied. The pectoral muscles, latissimus dorsi, and left elbow were contracted; the deep reflexes were markedly exaggerated; double Babinski's sign was present; and pes cavus with blueness of the hands and feet were evident. There were no fibrillary twitchings or affection of the bladder or rectum. Slight nystagmus to the right was noted, but no reaction of degeneration. The case was like one of lateral sclerosis or the peroneal type of progressive muscular atrophy.

Dr. HARRY RAINY showed for Dr. G. A. GIBSON a case of Bulbar Paralysis which had come on within a few months in a man aged 57 years. In his youth he had served in the army and had afterwards been a labourer. He acquired lues when in the army and a few months ago began to have trouble in speech and swallowing. At present he has atrophy and fibrillation of the tongue, with feebleness of the lips and tendency of fluids to escape through the nose. His speech is very imperfect, both articulation and phonation being impaired. The anterior nuclei seem to be intact. The case is one of chronic polio-encephalitis inferior, with extension downwards below the ordinary seats.

Professor F. M CAIRD read a paper on Epithelioma of the Tongue, a Review of 60 Hospital Cases. He said that carcinoma of the larynx, so long as it was contained within the limits of its cartilaginous box, and carcinoma of the sigmoid flexure enveloped by a protecting investment of peritoneum, resembled each other from an operative point of view in so far as a relatively favourable prognosis might be given in regard to the ultimate result. On the other hand, the final issue after surgical interventions which were concerned with carcinoma of the tongue and of the rectum was more uncertain, and recurrence was very liable to take place. This return was specially favoured by the relation of the muscular planes involved, the anatomical distribution of the

lymphatics, and by the lack of a defensive environment. The disease generally began as a local induration or a hard elevated area on the external border of the tongue; the covering epithelium gave way, an ulcer formed, and a most characteristic neuralgic pain referred to the ear and temporal region distressed the patient. Enlargement of the lymphatic glands of the neck ensued. If the trouble were situated near the root of the tongue or if it spread to the floor of the mouth the greater was the inconvenience felt by the patient in swallowing, masticating, or speaking. There might be a troublesome flow of saliva and the breath acquired an offensive odour. The greater the fixation of the tongue the greater was the difficulty in protruding the tongue. Antecedent irritation had long been recognised as at least predisposing to the development of carcinoma. Of the 60 cases no less than 38 gave a definite history of some local irritation; thus 27 ascribed the disease to ragged teeth; 18 had already had the offending teeth extracted and in some instances had derived a temporary amelioration of pain; and 7 came with ragged teeth *in situ*. Three blamed a badly fitting toothplate and 2 were convinced that the ulcer arose where the end of their pipe rested. Three had made a rather prolonged use of caustics for what had been apparently simple conditions and 1 had scalded her mouth. Tobacco had been branded as a possible factor. Of the 54 male cases not one was a non-smoker. Twenty used a pipe in moderation and 11 to excess. In regard to alcohol 3 were abstainers, 8 drank in moderation, and 14 confessed to excess. Syphilis accounted for none of the manifestations and only 4 males acknowle lged infection. Leucoplakia was only noted three times in the tongue or cheek. Nineteen patients gave no history of antecedent irritation; 2 were practically edentulous. A hereditary history of carcinoma was elicited from 5 patients. A consideration of the above tended to confirm the view that a relationship obtained between antecedent irritation and malignant disease, and the plea for greater attention to the teeth in later years was urged. Diagnosis rarely presented any difficulty, and if doubt existed it was readily solved by a microscopical examination (which, indeed, should be employed in every case). Only in 2 female cases did such an examination prove negative, and in one of these cases the patient died five months later from fungating cervical glands, and in the other six months later the lingual epithelioma was too advanced to allow of further operation. The only treatment which held out any prospect of cure was that of the knife. There was no other treatment. The so-called radical measures generally constituted a two-stage operation. They were greatly indebted to Mr. Butlin, who advocated a systematic attack on the adjacent lymphatic areas, and also brought their operative procedures into line with those practised in other parts of the body. The first stage consisted in removal of one-half of the entire tongue after the manner of Whitehead or of Syme. The second, following in about 10 days, was Butlin's extensive dissection of the side of the neck affected from the angle of the jaw to the sterno-clavicular articulation. This required that the entire sheet of connective tissue exposed, including the platysma, lymphatics, submaxillary and portion of the parotid salivary glands, and even the internal jugular vein itself, if need be, should be cleared away. Such extensive operations were associated with a remarkably low mortality, so low, indeed, that despite their uncertainty as to the ultimate result they were justified in urging operation. The chances of cure were not, indeed, as good as those which followed after pylorectomy for gastric carcinoma, but the risk incurred was not nearly so great. This relative freedom from risk was largely due to the free drainage and vascularity of the parts operated on. Local recurrence in the tongue was a rare after event, the patient's life was at least prolonged, and he was at least spared the misery and suffering which a fungating and loathsome mass of disease in the mouth entailed. The local recurrence in the glands of the neck was a less trying termination to life. Partial operations, in which the primary lingual disease was alone removed while the secondary glandular implication was left untouched, might be perfectly justified and indeed welcomed. For several years he had been led to perform the first stage under local anæsthesia, and with great advantage. After infiltration of the tip of the tongue with ½ per cent. solution of cocaine and adrenalin, two stout silk ligatures were carried through the tongue on each side of the middle line, half an inch from the tip, and the tongue pulled forward and further infiltration proceeded with. By this method anatomical details and vessels were clearly revealed and no gag was required, the patient being able to assist the surgeon by rinsing out the mouth. If it were necessary to divide the jaw at the symphysis, as in Syme's operation, the anæsthetic solution might be injected into the periosteum. By this mode of operation such general control was exercised that the adjuvant laryngotomy so strongly recommended might be discarded. The ease with which the patient speaks and feeds immediately after the operation was as striking as the slight discomfort which was experienced during the operation. The only disadvantage was an oozing of blood which made it necessary to secure all bleeding points. Iodoform and boric powder were applied to the raw surfaces. Should the disease have extended to the alveolar margin the whole depth of the jaw is not removed, but the hard sclerosed lower border was left, so preserving an intact mandibular arch, and in no case had he observed any recurrence in this bar of bone. The second stage required general anæsthesia, and if the oral cavity was opened into, sepsis of the upper part of the incision resulted, and so free drainage was essential. He generally removed the submaxillary salivary gland, the associated facial artery, vein, and lymphatics *en bloc*. If this salivary gland were spared, it underwent cirrhotic change which simulated a return of the disease. The average age of the patient was 49 years; the extremes were 23 and 73. Twelve cases were inoperable. There were seven fatal cases, chiefly from pneumonia, and all were very severe operations involving the removal of the entire tongue, tonsils, pharyngeal walls or adjacent areas of the entire lower jaw. Only 16 patients at present survive; the periods since operation vary from 20 months to 8 years. Such poor results were apt to make one despondent as far as the prospect of a radical cure was concerned, but better results might be obtained were a more radical form of operation employed. The results in private patients were slightly better than those now quoted.—Mr. C. W. CATHCART said that Professor Caird's results would compare very favourably with those of other surgeons. There were great varieties in the malignancy of carcinoma, and the removal of glands was a comparatively recent procedure. He thought that a preliminary laryngotomy was of great advantage, as it made the operation easier and safer.—Professor ALEXIS THOMSON said that Professor Caird's results were better than most surgeons could show. He thought that the operation should be done in continuity—tongue and neck. It required great courage on the part of the physician as well as the surgeon to tell a patient that a big operation must be done for an apparently trivial affection. Hardly any case survived for longer than three years after operation. He thought that the pathologist was often badly treated in only obtaining a small fragment for examination; he advocated the excision of a good piece of the growth for examination.—In reply, Professor CAIRD said that every form of carcinoma of the tongue was most malignant. The use of local anæsthesia did away with the necessity for laryngotomy. Recurrence did not usually take place in the floor of the mouth but at the root of the neck or clavicle.

Mr. D. M. GREIG read a paper on Recurrent Enlargement of the Salivary Glands. He said that the paucity of literature on the subject argued that this affection was of little importance. When the parotid glands were alone affected an erroneous diagnosis of mumps might be made. In an experience of 1500 cases of glandular enlargement Mr. Greig had notes of but five cases of recurrent enlargement of the salivary glands, and of these three were submaxillary and two parotid. 1. One case of submaxillary enlargement occurred in a healthy male aged 24 and recurred each spring. 2. A female, aged 23, suffered from submaxillary enlargement on the right side during eating or prolonged talking. 3. A woman, aged 44, exhibited recurrent swelling of the right submaxillary gland. 4. A female, aged 35, had a recurrent swelling of the right parotid, each attack being preceded and accompanied by fever. 5. A girl, aged 19, suffered from a similar affection. The parotid affection seemed to be the more common and tended to become bilateral. Many recorded cases of recurrent swelling of the parotid glands were said to have followed an attack of mumps. Many cases of glandular enlargement developed into tuberculous glands. Mr. Greig discussed the differential diagnosis of recurrent swelling from mumps and also the etiology of the former affection.

The rapidity with which the swelling generally occurred suggested a calculus, and it was possible that many such cases of recurrent swelling were mistaken for this blocking of the duct. Much allied to this recurrent swelling was the condition known as sialodochitis fibrinosa, where the duct became blocked with mucopurulent secretion. The condition of recurrent swelling would seem to be one of adult life, when at this period nervous affections were common, when secretions were prone to undergo alteration, where there might be digestive troubles or carious teeth. Treatment seemed to be of little moment. If the attack were exceedingly acute, incision might be necessary. Morestin and others recommended catheterism of the duct, and in chronic cases the injection of iodine solution along the canal.

Dr. R. CRANSTON LOW read a communication on Fungus Affections of the Finger-nails. That such diseases are more common than is generally supposed is borne out by the fact that within the last three years Dr. Low had observed no fewer than 19 cases. The cases fall into three groups: (1) ringworm; (2) favus; and (3) those due to other fungi of unknown origin. There were 16 of the ringworm variety, and these showed a marked predominance in the female sex, only two being in males. This predominance was difficult to explain; possibly the frequent washing of infected clothes might account for the predominance. Ringworm of the nails might occur at any age, the youngest of Dr. Low's cases being 10 and the oldest 58 years; the majority being between 20 and 30. This age incidence corresponded more nearly with that of tinea corporis than of tinea capitis. Ringworm of the nails was very rare in children with ringworm of the scalp. This infrequency might be partly due to the fact that ringworm of the nails was always due to the large spore fungus; but even in children with large spore tinea of the scalp, nail affections were very rare. The explanation might possibly be that tinea capitis so rarely caused itching that there was no tendency to infect the nails by scratching. The source of infection was difficult to trace, but one patient was infected whilst treating her own child's head for large-spored ringworm. Two of the cases were husband and wife and other two were sisters. Possibly spoon-shaped nails were more liable to ringworm affection. The duration of the disease varied from three weeks to seven years, the average being four years. The number of the nails affected varied from one to seven. In one-half the cases both hands were affected. Diagnosis was comparatively easily made as the appearance of the nails was constant. The splitting up and splintering of the free margin was characteristic, and the colour of the nails varied from a yellow-white to brown or black colour. In nearly all Dr. Low's cases there were definite zones presenting different colours and appearances. The infection seemed to take place from the under surface of the free margin. At the tip the nail became undermined, dark in colour, and softer than normal. The disease slowly spread up the nail which broke off in splinters. Then came a light yellow zone longitudinally striped with darker lines, and still further up there was a dark yellowish-red zone which showed little tendency to split up. The latter seemed to Dr. Low most characteristic of the condition and represented the spreading edge where the infection was just commencing. In addition there was also in many cases a heaping up of the nail into irregular prominences with dark brown depressions, and in such cases probably the nail bed was also affected. In many cases the lunule had disappeared and the tissues at the base of the nail were red and swollen. The diagnosis was confirmed by microscopical examination of pieces of the nail in liquor potassæ. The fungus appeared as rows of square spores arranged in characteristic rows. If not found in one specimen others should be examined. Cultures were made in six cases and yielded three different kinds of large spored ringworm fungus—viz., trichophyton acuminatum, rosaceum, and crateriforme flavum. This was the first occasion in which the last named trichophyton had been found in ringworm of the nails. As to treatment it was difficult, but all methods had for their object the softening and removal of as much of the diseased nail as possible, and the application of a continuous antiseptic dressing. The best results were obtained by Harrison's method—i.e., after daily scraping, the application of a solution of pot. iod. ℈i. in liq. potassæ and aq. dest. āā ℥ss. for half an hour on a piece of cotton wool. After this a solution of corrosive sublimate was applied for 24 hours and the finger covered with an indiarubber finger-stall. The nail became black and so soft that it could be removed. A new method devised by Dr. Norman Walker was that of applying ordinary Fehling's solution to the nail on lint and covering it with a finger-stall for a day or two. The nail by this time had become so soft as to be easily removed by forceps. After this a solution of copper sulphate (10 grains to 1 ounce) was used as a continuous dressing. Two cases of favus of the nails were met with in children who had already favus of the scalp; the nail was yellower in colour and more raised than in ringworm. From another case where the disease had lasted ten years, a peculiar fungus was obtained which differed microscopically altogether from either ringworm or favus. The culture also did not correspond to any of the common fungi and further examination was necessary.—Dr. W. ALLAN JAMIESON, Dr. NORMAN WALKER, and Dr. FREDERICK GARDINER took part in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Presidential Address.—Exhibition of Specimens and Cases.

THE first meeting of the session of this society was held on Oct. 28th, Dr. A. CHRISTY WILSON, the President, being in the chair.

The PRESIDENT read his opening address on Tuberculosis, its Prevention and its Diagnosis and Treatment by the Use of Tuberculin. He was of opinion that the balance of evidence was in favour of the identity of human and bovine tuberculosis, and that it should be the duty of the State to discover tuberculosis in living beasts. The use of tuberculin, which was supplied free by the Board of Agriculture, was at present entirely voluntary. By its use many apparently healthy animals were found to be tuberculous. In Denmark the regular procedure was much more efficient in this respect than in our own country, tuberculous cows being isolated and kept under observation by State veterinary surgeons. He strongly urged the necessity for the isolation of advanced cases of tuberculosis and the necessity for more systematically carrying this out. He did not think that the present modes of sanatorium treatment were entirely satisfactory, many cases being discharged as cured from one sanatorium only to enter another. He advocated the employment of inexpensive wooden huts in the construction of sanatoriums, which could be erected in every district with comparatively little expense. He then considered the various tests which had been made to determine the presence of tubercle, and in his experience had found von Pirquet's more accurate and safer than Calmette's. The subcutaneous method, however, was the most accurate and precise. He much preferred making his tests with Beraneck's T.B K. 1 tuberculin which he had used in a large number of cases, mainly surgical. He thought that Beraneck's T.B.K. 1 tuberculin was much preferable to Koch's new tuberculin, and if it were more widely employed as a therapeutic agent tuberculin treatment would gain in popularity. He quoted illustrative cases of improvement that had followed the use of this tuberculin. In conclusion, he thought that it was not necessary to control injections by the estimation of the opsonic index.

Mr. H. COLLINSON showed a specimen of Traumatic Rupture of the Spleen successfully treated by splenectomy. A labourer was kicked by a horse over the left costal margin; this was followed by hæmaturia and signs of intra-abdominal hæmorrhage. At the operation a large retro-peritoneal hæmorrhage was present over the left kidney.

Dr. R. BEATTIE showed a Mass of Hair which he had successfully removed from the stomach of a girl and which formed an exact cast of the organ and weighed 2½ pounds. Before the operation a hard gastric tumour was made out.

Mr. MICHAEL A. TEALE showed a child who had sustained Slight Concussion of the Brain. This was followed by swelling of the nasal half of each optic disc and marked rotatory nystagmus of a temporary nature.

Mr. H. LITTLEWOOD showed a Small Spirit-level and a Pencil-case successfully removed from adult male bladders.

Mr. C. H. GREENWOOD showed a Liver from a case of Portal Cirrhosis in a child who had been treated by fibrolysin. Microscopic appearances showed that softening of the fibrous tissue was taking place.

Dr. F. RITCHIE SINTON showed a specimen of extensive Ulcerative Colitis from a patient, aged 23 years, who had had intermittent diarrhœa, tenesmus, and passage of blood and mucus in the stools for 16 months. Death was due to iliac and pulmonary thrombosis.

Dr. W. H. MAXWELL TELLING showed a case of Myasthenia Gravis in a young girl. There were severe bulbar symptoms, the weakness of the pharyngeal muscles leading to choking attacks during meals. There was also marked weakness of the limbs. Considerable improvement of the bulbar symptoms had taken place.

Cases and specimens were also shown by Dr. C. OLDFIELD, Mr. J. F. DOBSON, Dr. A. BRONNER, Dr. T. WARDROP GRIFFITH, Mr. WALTER THOMPSON, Dr. T. CHURTON, Dr. A. G. BARRS, Dr. J. B. HELLIER, and Dr. E. F. TREVELYAN.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Presidential Address.

A MEETING of this society was held on Oct. 26th, Dr. A. W. RUSSELL, the President, being in the chair.

Dr. J. NIGEL STARK showed: (1) An Ovarian Cyst; (2) Hydrosalpinx; (3) Fibroids of the Uterus; and (4) Malignant Disease of Both Ovaries.

The PRESIDENT showed: (1) A Uterus with Malignant Disease at the Fundus; (2) Extra-uterine Pregnancy; and (3) Two Fibroids of the Uterus.

Dr. W. D. MACFARLANE showed an Adeno-carcinoma of Both Ovaries.

Dr. A. LOUISE MCILROY showed a Photograph of an Eight Months Fœtus with Enormous Hypertrophy of the Thyroid Gland.

Mr. D. DUFF showed a Fibroid of the Uterus.

Dr. A. M. KENNEDY showed: (1) The Liver and Kidneys from a case of Eclampsia; (2) Liver with Profuse Capillary Hæmorrhages from a case of Eclampsia; and (3) the Brain from a case of Eclampsia.

Dr. RUSSELL delivered his Presidential address on Prophylaxis in Obstetrics. In his introductory remarks, he referred to the fact that the society had now completed the first 25 years of its existence, and suggested that some suitable means should be taken to commemorate the event. One or two special points in its history were recalled, particular note being taken of the distinguished obstetricians and gynæcologists who had in turn held the office of honorary president, and of the benefit it had been to the society to observe this custom. It was intimated that Professor J. Whitridge Williams of Johns Hopkins University, Baltimore, had accepted election as honorary president for the next two years. The President, in coming to the address proper, said that though no special reference was made to it in literature, prophylaxis was the central principle of the art of obstetrics, the ideal towards which the true obstetrician must constantly strive, the persistent effort he must always make, to maintain the physiological character of childbirth. He pointed out that prophylaxis in obstetrics had to begin in the infancy of the future mother, for it was then that the seeds were sown that provided in after years a crop of cases of distorted spine and contracted pelvis. It was necessary to continue one's vigilance through the periods of girlhood, with its risks connected with school life and faulty development, puberty with the possibility of derangement of menstrual function, and adolescence with its perils, both physical and moral. He emphasised the need for early instruction regarding the reproductive functions. The principle of prophylaxis or prevention of complication was then traced and illustrated throughout the course of pregnancy in relation to constitutional diseases and uterine derangements, careful measurements of the pelvis, examination of the urine, choice of operative interference when such is necessary, the precautions necessary in handling or examining the patient. The subject was completed by showing the place of prophylaxis in labour and in the puerperium with regard to the promotion of spontaneous labour, the time to operate, the avoidance of such complications as hæmorrhage, sepsis, subinvolution, and uterine displacement.

Dr. J. M. MUNRO KERR (past President) thanked Dr. Russell on behalf of the Fellows of the society for his very interesting address. In his remarks he said that Dr. Russell had brought forward all the important conditions that might be prevented by prophylaxis. He had always been struck by the extremely broad-minded manner in which the President had attacked all obstetrical problems. Dr. Kerr congratulated Dr. Russell on his results on the operation of the induction of labour, and was with him in all that he had said on the measuring of pelves before labour set in and on the repeated examinations of the urine during pregnancy.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of the Pathological Section of this institution was held on Nov. 3rd, Dr. T. R. Bradshaw being in the chair.—Dr. E. Stevenson and Dr. R. E. Harcourt showed a specimen of Endothelioma(?) of the Eye.—Dr. Harcourt showed a culture of Aspergillus Niger, growing upon a lemon, isolated from the ear. The ear had been affected for two years, and recently the external auditory meatus was partly filled with pseudocholesteatomatous layers interspersed with black material.—Dr. K. A. Grossmann showed an Intra-ocular Melanosarcoma of the Ciliary Region of about six weeks' duration. The eye had received a severe electric shock shortly before illness began. Perhaps this had stimulated the growth of a small dormant tumour.—Mr. R. Thelwall Thomas showed a Retro-peritoneal Tumour weighing 22 pounds, microscopically a spindle-celled sarcoma, which was successfully removed from a patient who was still living, four months after the operation; also a recent Malignant Growth occurring in an intracystic papillomatous tumour of three years' duration.—Dr. J. Lloyd Roberts and Dr. D. Moore Alexander showed a Carcinoma of the Pancreas and Liver from a man aged 23 years.—Dr. Blair Bell and Dr. Ernest Glynn showed microscopical specimens of Calcareous Secretions in the Ovary of a patient aged 49 years. Concretions in the ovary were of two kinds—calcareous and those due to coagulated proteins, mixed with acid hæmatin. Both varieties probably arose in connexion with the Graafian follicles and were extremely rare.—Dr. N. P. Marsh, Dr. H. Armstrong, and Dr. Glynn showed two cases of Pyloric Stenosis from Infants which was due to muscular hypertrophy.—Dr. Glynn also showed lantern slides of Spirochætæ demonstrated by the "Burri" Indian ink method. He drew attention to the enormous number of the spirochæta refringens sometimes encountered in balanitis.—Dr. O. T. Williams read a note on the Estimation of Chlorides in Urine, pointing out the need of a more routine use of the method in cases of nephritis, so as to save the administration of salt-free diet in cases where there was no chloride retention. He also demonstrated the use of Sahli's glutoid capsule in the diagnosis of pancreatic diseases, showing its uses and its limitations.—Dr. Stenhouse Williams and Dr. Nauss read a note on the value of Rabbit Leucocytic Extracts in the Protection of Guinea-pigs from Anthrax Infection. The leucocytes were prepared according to Pettersson's method and were inoculated in some cases simultaneously with the infecting organisms, in others at intervals of 24, 48, and 72 hours after the inoculation with anthrax. In all cases the extract was found to exert a marked protective influence, many of the guinea-pigs living for prolonged periods, though all the controls were dead within six days.—Mr. Moore Alexander stated that leucocytic extract had been used in the treatment of acute infections in man. The diseases treated had included pneumonia, with or without empyema, epidemic meningitis, streptococcal endocarditis, &c. In the majority of cases so treated the results had been immediately and strikingly beneficial.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 27th, Mr. A. W. Cuff, the President, being in the chair.—Dr. A. G. Yates showed a patient, aged 41 years, with Chorea. In July, 1910, he began to suffer from a sharp stinging pain in the right shoulder. Shortly afterwards he noticed irregular movements in the hands which later spread upwards and involved the arms and head. He had now slight lateral nystagmus and constant pain above the right clavicle in the region of the brachial plexus. The knee-jerks were slightly exaggerated. In other respects he appeared to be healthy. His sister had suffered in the same way for the last 20 years.—Mr. W. S. Kerr showed the specimen from a case of Innominate Aneurysm causing Asphyxia from Tracheal Pressure. The patient, a man, aged 34 years, who had had syphilis, was

admitted to the Royal Infirmary for urgent dyspnœa. A laryngotomy and passage of a small catheter gave temporary relief. The trachea was flattened by the tumour.—Mr. G. H. Pooley read a paper on Squint. After shortly discussing the history of squint, he referred to the importance of the fusion sense in maintaining the proper position of the axes of the eyes, and pointed out that when the fusion sense was weak errors of refraction such as hypermetropia produced over-accommodation for near objects, and owing to the close relation between the centres in the brain for accommodation and convergence, over-convergence was produced. The fusion sense not being strong enough diplopia did not cause much trouble and the brain learned to disregard the impression from one eye. The causes of loss of fusion sense were not known, but were supposed to be associated in some cases, at any rate, with defects of the auditory apparatus or the labyrinth and allied to nystagmus, or to be simply due to developmental error in those association bundles which are late in receiving their myeline sheaths, or in the centres which they join up. He pointed out that it was necessary to undo the mischief step by step: first, to correct the error of refraction, then to occlude or atropise the fixing eye until the power of fixation returned to the squinting eye. He found in the cases which he investigated that 75 per cent. of the squinting eyes were amblyopic, and in these cases it was advisable to occlude or atropise the fixing eye for from 12 to 18 months or until good sight had returned to the amblyopic eye. If these had not already become straight, then operative measures might be successfully employed. A classification of squint was given and some pathological conditions associated with paralytic squint with amblyopia were shortly referred to. An appeal was made to educate the public in the importance of amblyopia and its treatment. Statistics from 100 cases were given.—Mr. R. Favell showed a specimen from a case of Cæsarean Section for Accidental Hæmorrhage.—Dr. A. E. Barnes showed a Tumour of the Pons, the nature of which had not yet been definitely determined.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Mr. W. Morley Willis, the President, being in the chair.—Mr. H. B. Tawse showed the case of a man 30 years of age with Congenital Occlusion of the Right Posterior Nares by a Bony Plate, causing Complete Nasal Obstruction on that side. He had also partial nasal obstruction of the left side of the nose due to a deviated septum.—Mr. Morley Willis then delivered his Presidential address on "The Significance of the Rigid Abdomen." He regarded this as one of the most important of all clinical signs in the diagnosis of an acute abdominal lesion. The abdominal parietes were innervated by the last six dorsal nerves, which through their sympathetic connexions supplied the abdominal viscera. Cutaneous hyperæsthesia, as worked out by Head, by its position served to help to diagnose the particular lesion. In most cases there were various other clinical signs to help the diagnosis, but very often the sole sign was abdominal rigidity. It was an early sign, and if they waited for further clinical manifestations an operation might prove unsuccessful. Illustrating his remarks, the President related the case of a boy, aged 16 years, who, four hours before being seen, was seized with sudden acute abdominal pain. The only physical sign was the abdominal rigidity. At the operation a perforation of the duodenum was discovered. In another case of a girl with a perforated gastric ulcer rigidity of the abdomen was the only sign. In any severe disease of the peritoneum reflex abdominal rigidity was at once caused. One fallacy was that in certain types of pleural disease abdominal rigidity was present. However, in these cases the temperature was usually higher and the respirations were more rapid and generally "catchy" at the end of inspiration. Finally, he laid it down as a good surgical axiom that the necessity for operation was urgent in exact proportion to the intensity of the abdominal rigidity.—A discussion then took place in which Dr. F. H. Jacob, Dr. C. H. Cattle, Dr. Parry Jones, Dr. H. Michie, Dr. K. Black, Dr. A. Stanley Green, Dr. J. A. O. Briggs, and Dr. W. Hunter took part. Several of these gentlemen related cases in which abdominal rigidity was absent, although the conditions were urgent; others had seen cases where abdominal rigidity was present, but the cases had recovered without surgical treatment.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Nov. 4th, Dr. Leonard Williams, the President, being in the chair.—Dr. N. S. Finzi read a paper on the Radium Treatment of Cancer. Having described briefly the physical characteristics of the α, β, and γ rays, he pointed out that these rays were given out in all directions even from flat surface applicators, and therefore to get the best results it was advisable that the radium should be surrounded entirely by the tissue of the growth. The intensity of the radiations varied inversely as the square of the distance, and this fact imposed some limitations in the treatment. Both β and γ rays exerted a selective action on cancer cells, so that the same dose which was innocuous to a healthy tissue would destroy the cancer cells, but the γ rays were much more selective than the β, and therefore it was necessary to use metallic filters to cut off the majority of the β rays. The latent period of the β and γ rays was different. In some cases the absorption of a primary growth led to some retrogression of metastases, but the treatment of every deposit that could be reached was, nevertheless, advisable. The class of case suitable for treatment depended on (1) the microscopical structure, (2) the position and size of the growth, and (3) the constitution of the patient. It was necessary to treat the whole tumour thoroughly with filtered rays, to use as much radium as possible, and to give one maximal dose every six weeks. In 64 completed cases of malignant growths there were seven cases in which the growth had completely disappeared. They were in the lip, breast, uterus, prostate, rectum, and œsophagus, and most of them had the diagnosis confirmed by microscopical examination. He had a further 23 cases still under treatment, of some of which he was very hopeful. Relief of pain and discharge was a marked feature even when the growth did not disappear. Rodent ulcers were practically always curable.

Reviews and Notices of Books.

Accidents in their Medico-legal Aspect by Leading Medical and Surgical Authorities. Edited by DOUGLAS KNOCKER, Barrister-at-Law. London: Baillière, Tindall, and Cox; and Butterworth and Co. 1910. Pp. 1254. Price 30*s*.

DURING recent years the amount of litigation under the Workmen's Compensation Act has developed to very large proportions. In all the cases the medical element is naturally of the greatest importance. The medical witnesses have to be questioned by members of the legal profession, and it is therefore necessary that the barristers and solicitors engaged should have some knowledge of the scientific issues involved. The ordinary medical text-books and treatises are not always easy for other than medical practitioners to fully comprehend, and if sentences are removed from their context confusion is likely to arise. Mr. Knocker has therefore made himself responsible for the volume now before us, the general aim of which is to make lawyers and medical men understand each other in their mutual relations. The labour of editing such a vast work must have been enormous, but Mr. Knocker is a barrister in active practice, and has had a large experience in the nature of the information required. He has been careful to avoid questions of purely academic interest, and has only included matters of actual importance, and by these limitations he has enormously increased the practical value of his work.

The book is divided into three sections—the legal part, the medical part, and the case guide. An index covers all three parts. The legal part has been written by Mr. Knocker himself. It is not intended to be exhaustive; all that is claimed for it is that it gives to medical men a short statement of the law on matters of interest to them. Reference is made to numerous cases, and this will afford help to lawyers by leading them at once to the line of cases they desire for various points in the law of accidents. An important matter touched upon is that of contributory negligence. It is pointed out

that circumstances of the nature of contributory negligence on the part of the injured person, which may afford a defence to an action brought at Common Law or under the Employers' Liability Act, both being actions founded upon negligence, may not furnish any defence to proceedings instituted under the Workmen's Compensation Act. Such a defence is not available under this last Act unless such negligence on the part of the applicant amounts to "serious and wilful misconduct," as defined by the cases, and even then is not available when death or serious and permanent disablement results from the accident.

The medical part of the work has been written mainly to assist the lawyer to understand the consequences of an accident to the part of the body alleged to have been injured, and to help him to follow the medical witnesses when they deviate slightly from the beaten track. It is not intended to instruct the medical expert in the details of his profession, but doubtless he may derive benefit by learning the special points to which counsel is likely to ask him to turn his mind. The various articles have been mainly written by physicians and surgeons attached to the teaching schools, and their names vouch for the soundness of the views which they express. The effect of accident on the various systems and parts of the body are considered in detail, and there are also articles on the effect of poisons, alcohol, anæsthetics, and electrical injuries. Each article is planned as far as possible on definite lines, and its contents are classified under identical and uniform headings. By reference to these headings the following questions can in each case be answered: What are the immediate consequences of the accident? What chance is there of disease supervening as a remote consequence of the injury? Was there any disease existing before the accident and aggravating its effects? Within what time will the man be physically cured, and when will he be fit to return to his former work, or to undertake some other employment? Is there any need for an operation, and if so, is it such an operation as a reasonable man would elect to undergo? Is there any likelihood of a recurrence of the consequences of the injury? In articles dealing with injuries technical terms have naturally to be employed, and at the commencement of each chapter these terms are explained, so that members of the legal profession can more easily follow the text. In the chapter on Accidents Occurring in the Tropics, we notice a diagram of what is stated to be the cycle of development of the malarial organism. It is only fair to state that the picture was not furnished by the author of this section.

The third section of the book is the case guide, in which is given a short epitome of nearly every case referred to in the legal section, with a number of other cases of personal injury. The object of this collection is stated by Mr. Knocker to be threefold: (1) to afford lawyers numerous instances of cases where medical points have arisen and been thrashed out, in order to assist them in advising upon or conducting similar cases; (2) to give, as far as possible, to all engaged in litigation some idea of the amount of damages which will probably be recovered; and (3) to assist medical practitioners in estimating the probable duration of incapacity after injury.

It will thus be seen that this work covers a large field, and members of the medical and legal professions who have had experience in cases under the Workmen's Compensation Act will readily appreciate the great value of such a book. We heartily congratulate Mr. Knocker on the success of his editorial duties and can strongly recommend the work to members of the two professions for whom it is intended. It is printed in clear type on good paper. The headlines are well arranged and the numerous illustrations add to the value of the written descriptions.

The Prescribing of Spectacles. By ARCHIBALD STANLEY PERCIVAL, M.A., M.B., B.C. Cantab., Senior Surgeon to the Northumberland and Durham Eye Infirmary. Bristol: John Wright and Sons, Limited. 1910. Pp. 159. Price 5*s.* 6*d.* net.

WE fear that the average student of ophthalmology, if he takes up this book, will view its pages, studded with mathematical formulæ, with amazement and such profound consciousness of his own shortcomings that he will lay it down in despair. Be it said at once that that is the student's fault, and not the author's. In the ideal training of an ophthalmologist he will have to take a serious course of mathematical optics, geometrical and analytical, theoretical and applied. But that day is not yet, and few students have both the knowledge and the energy to grapple with the problem exhaustively. For such as have the courage and enthusiasm no better introduction to the algebraical exposition of the subject can be found in the English language. Perhaps it would have been kinder to have tempered the wind to the shorn lamb and made freer use of geometrical explanations and proofs, but much of the subject matter of this book has been treated thus in lucid style by Dr. Maddox. Anyone who masters Maddox's Ocular Muscles and this book will have laid an excellent foundation, and he will find that his labour has not been spent in vain. Instead of rule-of-thumb methods only too commonly in vogue he will be armed with precise knowledge, which is the surest weapon in the battle for success. The book treats of accommodation, static refraction, and faulty tendencies and deviations of the ocular muscles. An optical section, culled largely from the author's treatise on optics, deals mathematically with the eye as an optical instrument, the tilting of lenses, two cylinders with axes asymmetrical, periscopic lenses, prismospheres, and so on. We cordially recommend the book and hope that it may be more widely studied than we fear is likely to be the case.

Physical Diagnosis. By RICHARD C. CABOT, M.D., Assistant Professor of Medicine in Harvard University. Fourth edition, revised and enlarged. With 5 plates and 240 figures in the text. London: Baillière, Tindall, and Cox. 1910. Pp. 579. Price 15*s.* net.

THE proper physical examination of cases and the correct interpretation of the signs elicited are matters of great importance in regard to diagnosis. They are also essentials in the proper equipment of the practitioner which can only be acquired by systematic examination of cases in the wards or out-patient department. A practical handbook on these subjects, from which the student can learn the proper methods of physical examination and be warned against errors, fallacies, and inaccuracies, is therefore likely to be of special value. Dr. Cabot's book is well adapted for such a purpose: it is of convenient size, it is practical, and also eclectic, since only those methods are described which the author has practical experience of, and no mention is made of those which he believes to be useless. It is this personal selection of methods in place of an ill-digested presentation of every method which gives this book its special character, and doubtless accounts for the appearance of four editions in the space of five years.

After the discussion of certain data relating to the body as a whole, including considerations of weight and temperature, the regional examination of the body is proceeded with and the various organs and systems are dealt with in order. The methods of examination appropriate to each are described, the information afforded is clearly stated, and the differential diagnostic value of each sign is worked out. Where possible tabulated lists of conditions giving rise to certain signs are attached to each section, and these constitute a valuable feature of the book. The physical examination of the

respiratory and cardio-vascular systems is described at considerable length. The methods of inspection, palpation, percussion, and auscultation are admirably worked out. The directions for the proper percussion of the chest and heart and for the choice and use of the stethoscope might with advantage be studied by all students on starting their clinical medical work, though we notice that Dr. Cabot has little or nothing to say of the rigid wooden stethoscope, which certainly has its uses. The individual pulmonary lesions and the various forms of cardiac disease are carefully and fully described, together with their differential diagnosis and the variations in the physical signs found in association with them. The essential features of blood examinations are given, and directions afforded for counting corpuscles, preparing and staining films, and for the interpretation of the results obtained. The examination of exudates and transudates and the recognition of parasites and their ova are also considered. In connexion with diseases of the kidney the analysis of the urine is described, and the significance of the results obtained is discussed, but neither kidney diseases nor affections of the nervous system are dealt with as fully as are those of the lungs and heart.

Dr. Cabot obviously writes from a large practical experience, and this gives a special value to his statements. He is sometimes caustic in his disagreement with commonly repeated inaccuracies. Thus, for example, he writes: "Enlarged veins about the navel, the so-called 'caput Medusæ,' are commonly found in text-books but rarely in cirrhosis of the liver." The illustrations are numerous, but not of a very high order. Those which are diagrammatic are useful, but of those which are reproduced from photographs many leave much to be desired. They are not worthy of the book, which is a useful handbook on the subject with which it deals.

Amœbic or Tropical Dysentery: its Complications and Treatment. By W. CARNEGIE BROWN, M.D. Aberd., M.R.C.P. Lond. With illustrations. London: John Bale, Sons, and Danielsson. 1910. Pp. 271. Price 7*s.* 6*d.* net.

THIS work is intended mainly for the use of the practising medical man, and one of its principal aims is to lay down precise and comprehensive directions for the treatment of the various clinical types of amœbic dysentery. The importance of the malady and its frequency among Europeans who are called upon to reside in the tropics are now fully recognised. For some little time information on the disease has been accumulating, and Dr. Carnegie Brown now furnishes an interesting general survey of the facts and opinions which have been formulated respecting this form of tropical dysentery, as well as of other protozoan infections of the human intestine.

The book comprises 24 chapters, which deal with the subject in seven parts—viz., (1) general; (2) biological; (3) clinical; (4) pathological; (5) etiological; (6) complications and sequelæ; and (7) treatment. After a short introduction the author gives the history and literature of the disease, and then goes on to discuss its epidemiology and geographical distribution. Following this, classification and the general relations of protozoa to intestinal diseases are considered. Four chapters are devoted to the entamœbæ of the human intestinal tract, after which other infections of the human alimentary canal are dealt with. The symptoms, diagnosis, and morbid anatomy of amœbic dysentery are respectively treated of in the succeeding chapters, as is also "the case for the pathogenicity of *Entamœba histolytica*." The causes of amœbic dysentery are then described, and hepatic abscess and other sequelæ receive the attention they need. A chapter is given on the prophylaxis of the malady, after which the subject of treatment is fully considered, both of acute and chronic forms, diet, drugs, local medication, as well as surgical and other methods of treatment being each in turn discussed. Lastly, the treatment and prophylaxis of amœbic abscess of the liver are described.

The various views on the treatment of amœbic dysentery are clearly set out, but the author does not altogether share the high opinion held by McLean and others as to the value of ipecacuanha, the *radix antidysenterica*, which in the past enjoyed for so long the reputation of being almost a specific for the disease. Dr. Carnegie Brown describes it, however, as "a remedy of moderate but definite practical utility." But whether we agree or not with the author in his views on this or other parts of the subject we must admit that he sets out the various kinds of treatment clearly and well, so that the practitioner who consults the book can never feel at a loss. For the practising physician, for whom the book is intended, the work cannot fail to prove of great service. The matter is dealt with in a clear and comprehensive manner. We confidently recommend the volume to those who may be called upon to treat or prevent amœbic dysentery.

Die Gonorrhoe des Mannes und ihre Komplikationen. (*Gonorrhœa in Man and its Complications.*) Von San.-Rat. Dr. HANS WOSSIDLO. Second revised edition, with 54 illustrations in the text and 8 plates, some of which are coloured. Leipzig: Georg Thieme. Pp. 337. Price M. 12.

NOT long since gonorrhœa was looked upon as a comparatively mild disease and of much less importance on the whole than syphilis, but at present it is doubtful whether, when we consider all the harm it may do and all its complications and sequelæ, it may not be looked upon at least as severe as, if not even more serious than, syphilis, especially if Ehrlich's recently introduced treatment with "606" fulfils its promises. With this enhanced appreciation of the importance of gonorrhœa there comes naturally the necessity for the more close study of the disease in order that its treatment may be more rapid, more thorough, and more certain. The first great step in advance was the recognition of the gonococcus, for before that discovery the exact connotation of the word gonorrhœa was uncertain. Recent advances have chiefly effected a wider knowledge of the extent of the lesions produced by the disease and better directed attempts to put an end completely to it as soon as it is recognised.

Of a large number of excellent works on this subject one of the most useful and practical is that the second edition of which is now before us. Dr. Wossidlo writes with a full knowledge of his subject, and he is well acquainted with what other surgeons have done in this branch of medicine. His book is systematically arranged. Commencing with the story of the gonococcus and the methods of staining it, there follows an account of those points in the anatomy of the urethra which are important in this connexion. The various manifestations of the acute form of the disease are then described and the treatment is fully discussed. Though many methods are referred to, probably the most useful portion of these chapters is that in which the author describes his own methods of treatment. In chronic gonorrhœal urethritis insistence is laid on the value of the urethroscope for the diagnosis of the exact condition present, and a large number of coloured illustrations are given showing very graphically various urethroscopic appearances. Succeeding chapters deal with the gonorrhœal affections of the prostate and neighbouring organs, and cystitis and pyelonephritis are also described. The treatment of stricture of the urethra is fully dealt with. Although a chapter is devoted to the manifestations of the disease in other parts of the body, we think that

the importance of this subject deserves rather more than the ten pages allotted to it, but on the whole the book affords a full and clear presentation of our knowledge of gonorrhœa.

The Microscopical Examination of Foods and Drugs. By H. G. GREENISH, F.I.C., Professor of Pharmaceutics to the Pharmaceutical Society of Great Britain. With 209 illustrations. Second edition. London: J. and A. Churchill. 1910. Pp. 386. Price 12*s.* 6*d.* net.

THE first edition of this well-known work was published in 1903 and has always held the position of a standard authority on the subject with which it deals. The author has not found it needful to make much alteration in preparing this second edition, but has made some additions, the chief one being a section on the more commonly recurring adulterants of powdered foods and drugs. The title is not quite accurate; the scope of the work is confined to substances derived from the vegetable kingdom, with the exception of sheep's wool and silk, neither of which can be said to come under the headings of a food or drug. With this qualification the work is both detailed and comprehensive. Beginning with a description of the various starches, their microscopic appearances and technique of preparation are minutely described; then follow sections on hairs and textile fibres, spores and glands, woods, stems, leaves, flowers, barks, seeds and fruits, rhizomes, and roots. A special feature in the work consists in the profusion of excellent illustrations, of which there are 209, all of them admirably reproduced; they are drawn to large scale, many of them by the author himself or in conjunction with M. Eugène Collin. The last section but one is devoted to a description of the adulterants of food and drug powders, these adulterants being classified and described according to their source of origin, not according to the situations in which they are likely to be found, or grouped under the substances which they are used to adulterate. It would have been helpful to the student to have described and figured under the heading of each article of food or drug dealt with any adulterants likely to be met with in its examination. A profusion of technical terms are necessarily used, especially in reference to botanical physiology; it would have been useful to have appended a glossary, as this book will be consulted by many who are not teachers or students of botany as a science.

LIBRARY TABLE.

Conquering Consumption. By WOODS HUTCHINSON, A.M., M.D. London: Constable and Co., Limited. Boston and New York: Houghton Mifflin Company. 1910. Pp. 138. Price 4*s.* 6*d.* net.—This is another of the many books which have recently been written with the object of showing that phthisis is being slowly driven from our midst and that the fight against it is a winning though slow one, victory being more sure if the battle be fought with greater courage on the part of the public. In a series of 12 chapters Dr. Hutchinson tells his readers, who are members of the public rather than of the medical profession, something about the tubercle bacillus, how it enters, what it does, and how best to resist its activities. The natural cure for consumption, he says, is the camp, and one chapter is devoted to this subject, while another gives specifications for various structures which can be easily built for home treatment when circumstances prevent the patient from leaving his residence. In a chapter headed, Cash and Consumption, the author points out that effective treatment must be expensive, especially to the poor. "Here is where the community must step in and help," he says. "The treatment of disease, if it is to be successful, can no longer be individual—it must be social. The community must provide the means for the worker to recover from his tuberculosis. It is morally bound to do so, because in seven cases out of ten it has made him tuberculous. It can abundantly afford to do so, to escape supporting his widow and educating his orphan children." The book is a powerful appeal to the public intelligence.

The Parson's Pleasaunce. By P. H. DITCHFIELD, M.A., F.S.A., F.R.S.L., F.R.Hist.S. London: Mills and Boon, Limited. 1910. Pp. 368. Price 10*s.* 6*d.* net.—This book is an account of the recreations and pastimes of a country parson whose hobby is archæology, who loves books and gardens, and who knows how to make the most of an annual holiday. It is divided into seven chapters, containing papers, many of which have already appeared in well-known magazines, on such subjects as gardens, old gardening books, rare tomes, village life, folk lore, and travel. As might be expected, the author has many stories to tell of the working of the rustic mind, especially in matters connected with the church. We may quote two. A parish clerk explained the 13 small figures at the foot of a monument as representing the number of wives which the subject of the monument had married, and replied to a lady who expressed her astonishment as follows: "Well, yes, marm, but you see it were rather a 'obby of 'is." A farmer who was marrying his fourth wife, and to whom it had been suggested that all his wives had possessed money, replied, "Yes, sir; but what with bringing on 'em in, and carrying on 'em out, there ain't no profit." The volume is embellished with reproductions of old prints and other illustrations, and will make a companion for moments of leisure to those who like to think—and not to think too deeply.

Life and Sport of the Norfolk Broads. By OLIVER G. READY, B.A. London: T. Werner Laurie. 1910. Pp. 249. Price 7*s.* 6*d.*—"I cannot believe that any other boy ever had so happy and so interesting a childhood as myself, with the sea on one side, the dear old Broads on the other, and the kindest of friends at every turn." In illustration of this prefatory remark the author describes men, beasts, and things in the land of the Broads as they appeared to him some three decades ago. In a style at once clear and picturesque he makes the reader feel the exhilarating effect of the wind and the frost, the cheerfulness of the sun's glow, and the magic of nature. Birds, gardening, games, live-stock, boyish pranks, fishing, shooting, sailing, ratting, and rabbiting,—all are treated in a way that only experience could have dictated, and the result is a readable book and, as far as medical men are concerned, an eloquent plea for an out-door life.

Low's Handbook to the Charities of London. London: Eliot Boothroyd. 1910. Price 1*s.*—This useful handbook of 248 pages has now reached its seventy-fifth year of publication and contains in an easy form for reference all the information which the general inquirer is likely to need with regard to the charities of London. A classified table of contents shows the various institutions according to their objects, while a brief account of each charity is arranged alphabetically. The preface to the handbook this year takes the form of an interesting sketch of the history of orphanages.

The Airy Way. By GEORGE A. B. DEWAR. London: Chatto and Windus. 1910. Pp. 253. Price 6*s.* net.—The way of an eagle in the air was one of the things "too wonderful" for the writer of the Book of Proverbs, and although since his day we have made much progress in our knowledge of the dynamics of flight the complete conquest of the air has still to be achieved. The author of "The Airy Way," however, deals with the subject principally from the point of view of a lover of nature and a careful observer of the ways of flying creatures, and discusses in a pleasant manner the motions of the wings of the inhabitants of the air as they appear to the sense of sight. This sense,

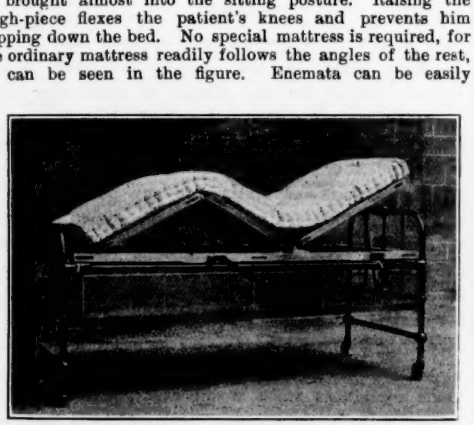
however, is very likely to be deceived, especially in the case of rapid motion like that of the wings of many birds and insects when in flight. Of this the author is aware, and he does not pretend to solve a problem towards the solution of which we are as yet in the experimental stage, but he gives us some charming descriptions of the winged feats of birds, bats, and insects which he has been watching for many years.

New Inventions.

A NEW BED-REST.

I BRING this comfortable and easily-adjusted bed-rest, especially adapted for maintaining "the Fowler" position, to the notice of the profession. My experience of several of the many bed-rests in use is either that they are difficult to manipulate or that the patient does not find them comfortable. After many trials and alterations I have found the rest which is represented in the accompanying illustration to be both comfortable to the patient and easily worked by one nurse.

The rest consists of a strong wooden frame carrying three hinged pieces for the support of the patient's back, thighs, and legs respectively. By means of a handle acting through a ball-bearing box screw the three pieces can be raised and fixed at almost any angle, so that, if desired, the patient can be brought almost into the sitting posture. Raising the thigh-piece flexes the patient's knees and prevents him slipping down the bed. No special mattress is required, for the ordinary mattress readily follows the angles of the rest, as can be seen in the figure. Enemata can be easily



administered and the bed-pan introduced by lowering the thigh-piece, while continuous saline injections can be given once the rectal tube has been inserted.

I have found the bed invaluable, not only in maintaining the Fowler position after abdominal operations, but in many other conditions. The rest can be made to fit any ordinary single bed, but should any difficulty arise it can be laid on trestles, when it acts both as bed and bed-rest. I am indebted to Mr. Woodward, clerk of works to this infirmary, for carrying out and elaborating the idea and also for the photographic representation.

PETER PATERSON, M.B., C.M.Glasg., F.R.F.P.S.Glasg.,
Glasgow. Surgeon to the Glasgow Royal Infirmary.

BRITISH MEDICAL BENEVOLENT FUND.

AT the October meeting of the committee 27 cases were considered and grants amounting to £209 made to 23 of the applicants, one case being passed over and three postponed for further inquiry. Appended is an abstract of the cases relieved:—

Widow, aged 32 years, of L.R.C.P., L.R.C.S. Edin. Since husband's death six years ago has supported herself by nursing and letting lodgings, and now asks for assistance towards the education of her two children, aged 12 and 8 years. Voted £12.

Widow, aged 50 years, of M.R.C.S. Has been incapacitated for some months owing to an accident, and is dependent on a daughter whose earnings are small. Voted £5.

Daughter, aged 68 years, of late M.R.C.S., L.S.A. No income. Is given a home in return for services, but receives no salary. Suffers from increasing deafness and general ill-health. Voted £12.

Widow, aged 46 years, of L.K.Q.C.P. Irel. Since her husband's death has maintained herself by letting lodgings and sewing, but owing to a recent illness is obliged to ask for a little help. Voted £5.

Widow, aged 34 years, of M.D. Glasg. Is quite destitute through recent death of husband and requires assistance whilst seeking suitable work. Voted £10.

L.S.A., aged 65 years. Broke down in health after the death of his wife at the end of a two years' illness and has consequently lost most of his practice and been obliged to leave his house owing to arrears of rent. Is given temporary shelter by an old patient and hopes to make a fresh start. Voted £10.

Daughter, aged 39 years, of late F.R.C.S. Has recently undergone an operation for tubercular disease of a large joint and is practically incapacitated. Relieved four times, £48. Voted £12.

Daughter, aged 40 years, of late L.R.C.P., L.R.C.S. Edin. Endeavours to support herself by nursing but finds considerable difficulty in obtaining cases. Relieved six times, £50. Voted £6.

Daughter, aged 54 years, of late M.R.C.S., L.S.A. No income and almost incapacitated by ill-health. Relieved eight times, £73. Voted £12.

Daughter, aged 61 years, of late M.R.C.S. Receives a small weekly allowance from two friends, but is unable to earn anything owing to permanent ill-health. Relieved six times, £66. Voted £12.

Daughter, aged 57 years, of late M.R.C.S. No income; supports herself by letting rooms and knitting. Health delicate. Relieved six times, £72. Voted £12.

Widow, aged 43 years, of L.R.C.P., L.R.C.S. Irel. Since husband's death has endeavoured to support herself by taking paying guests, but has had her furniture seized for rent and now contemplates emigration to Canada. Four daughters, but none able to help and two dependent. Relieved once, £10. Voted £2, and application to be further considered next month.

Daughter, aged 47 years, of late M.D. Edin. Is a daily governess, but at present has no post. Relieved twice, £10. Voted £5.

M.D. Aberd., aged 58 years. Quite incapacitated by lateral sclerosis and dependent on pensions from charitable institutions. Two children, aged 12 and 6 years. Relieved twice, £28. Voted £8.

Widow, aged 63 years, of L.R.C.P., L.R.C.S. Edin. Only income a small pension from a city company, and unable to follow any occupation on account of severe chronic rheumatism. Relieved twice, £16. Voted £10.

Widow, aged 43 years, of L.R.C.P. Edin., M.R.C.S. Eng. Supplements the help given by a stepson only earning a small salary by letting lodgings. Relieved twice, £24. Voted £12.

Widow, aged 70 years, of M.D. St. And. No income, and family only able to give slight help. Voted £12.

Daughter, aged 55 years, of late M.R.C.S. Mentally unfit to follow any occupation, and apart from a little help from a brother is dependent on three half-sisters who all have to earn their living. Relieved six times, £61. Voted £5.

Widow, aged 70 years, of M.R.C.S. Dependent on an old age pension and a daughter, who is a governess. Relieved five times, £62. Voted £12.

Widow, aged 43 years, of M.R.C.S. who for many years held a teaching post at a medical school. Endeavours to support herself by letting lodgings. Three children, all at institutions. Relieved once, £15. Voted £10.

Wife, aged 61 years, of L.F.P.S. Glasg. who has been in bad health for three or four years but has just obtained a ship's surgeoncy. Applicant lets lodgings but cannot make sufficient for maintenance. Relieved once, £12. Voted £1 and case to be considered again after further inquiry.

Daughter, aged 75 years, of late M.R.C.S. who was a surgeon in the Scots Guards. Was well provided for but lost most of her capital through the defalcations of the family solicitor and the rest through unfortunate investments. Now dependent on an old-age pension, with occasional help from relations. Relieved once, £18. Voted £15.

Widow, aged 56 years, of L.S.A. No income, and dependent on a son earning a small weekly wage. Relieved nine times, £102. Voted £12.

WATERWORKS IN HAVANA.—*La Prensa Médica*, a new medical journal which is published monthly in Havana under the editorship of Dr. Enrique Núñez, is very strongly of opinion that the subject of the water-supply should not be allowed to fall into the hands of private speculators, but should be carried out after full consultation with the medical practitioners of the capital, who are urged to form themselves into a committee for the purpose of impressing their views on the municipal authorities.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Moine, formerly inspecting medical officer in the French Military Medical Service.—Dr. Melchior Willim of Breslau, who married in 1880 a princess of the Royal Family of Würtemburg, who was obliged to resign all her dignities before being allowed to wed a bourgeois doctor. They have a son who is an ophthalmic surgeon.—Dr. De Forest Willard, formerly professor of Orthopædic Surgery in the University of Pennsylvania, Philadelphia.—Dr. James Nevins Hyde, professor of dermatology in Rush Medical College, Chicago.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 12, 1910.

The Practitioner and the Prescription.

THE article and letters[1] which we have recently published as to the rights of property or of control which exist, or which physicians might wish to see existing, with regard to prescriptions given by them to their patients call attention to a subject of real importance. The position is that conditions prevail in connexion with the property in and control over prescriptions which are undesirable in the public interest and in that of the medical profession; that these conditions can hardly be altered except by the intervention of the legislature; and that the likelihood of any effective legislative interference is remote. The undesirable conditions are not restrained or corrected by the law of copyright in any important degree. It is conceivable, and we believe that in the past it has been either attempted or threatened, that someone obtaining possession of books containing copies made by pharmacists of prescriptions dispensed by them, might fill a volume with prescriptions arranged under what he conceived to be appropriate headings for popular sale and distribution. To prevent the bringing out of such a work with the names of the prescribing medical practitioners attached to their prescriptions might present little difficulty, but it would be otherwise if no such ground of interference existed, and if it were necessary to depend upon establishing the copyright of individual physicians in prescriptions published anonymously. If such copyright does exist its ownership would no doubt be governed by the principles indicated by Mr. WIPPELL GADD, and illustrated by him from the analogous cases of the architect's plans, the photograph, and the analytical chemist's report. Without, however, going so far as to say that a physician's prescription is in no case a subject of copyright, we are of the opinion that it would be found difficult to establish the necessary element of original invention in many.

However, the danger of appropriation and publication in such a manner as we have suggested above is remote, or not likely to occur frequently, and the real question is whether any practicable means can be devised to prevent effectively the repeated dispensing of the same prescription to an unlimited extent either to the patient himself or to the friend to whom he may choose to give it. In referring to the patient's friend we have before us what we believe to be the by no means uncommon case of the man who says to another who has been telling him of his ailments, "I believe you are suffering from just what I had six months ago; I have got Dr. Blank's prescription, and I'll lend it to you. He's a first-rate man and he cured me in a week. Take it, my dear fellow, and welcome; it will save you two guineas." We have cited here men as the offenders, but women are every whit as meanly imprudent. The practice indicated is an objectionable one from the point of view of the medical practitioner and also from that of the members of the public who are prone to try dangerous experiments upon themselves. As Mr. WIPPELL GADD puts it: "In the best interests of the patient, the use of the prescription should be limited, as the very efficiency which it may possess in the morbid condition of the person for whom it was written may render it noxious or even toxic to the same person when in a state of health, and still more so to other persons of different age, sex, or habits of life." If, however, we concede that it is a practice not affected by the law as it stands, and consider the possibility of devising some means of interference which Parliament might reasonably be expected to grant, we must bear in mind the general policy in such matters of the Government under which we live. The law does not forbid the sale of any supposed cure for any existing or imagined disease, or the giving of advice of a medical character either gratuitously or for reward by any person. The prescription which a medical man may have written for a patient suffering from some form of dyspepsia which he has carefully diagnosed, may be entirely unsuited for the ailment of some other person whom he has never seen or heard of. It is, however, not likely to do him more harm than some advertising quack's "liver pill" or "kidney purifier," which the public is free to purchase and consume in any perilous quantity, and there is, therefore, no very tangible ground for inviting the legislature to interfere with the liberty of the subject in one instance more than in the other. If, however, Parliament were ever induced to remodel the whole of the law relating to the practice of medicine, and to check for the sake of the public the practice of the quack and the advertising "remedy"-monger, then it might be possible to frame regulations which would check, if they could not prevent entirely, the misuse of prescriptions in the manner indicated.

Mr. WIPPELL GADD has suggested recourse to the disciplinary powers of the Pharmaceutical Society, which might be asked to remove from its membership, as for an act subversive of the interests of the Society, a pharmacist dispensing a prescription if in so doing he disregarded a direction written on the face of it by the prescribing physician. This plan could be adopted without any statutory change by means of a by-law which is already in existence. As an alternative it is often suggested that prescriptions should be written under a printed heading to be filled up by the medical man with dates or other particulars, these being worded so as to limit its use; and the same heading might contain a warning easy to be read and plainly worded to the effect that the prescription is written to meet the case of the individual named upon it and is not likely to prove beneficial to anyone else. The whole question, however, is one of difficulty. Its solution by means of legislative change has hitherto not appeared within the range of practical politics. But a joint committee is now

[1] See THE LANCET, Oct. 1st, pp. 1019, 1030; Oct. 15th, p. 1168; and Oct. 22nd, p. 1241.

sitting of medical men and pharmacists appointed by the British Medical Association and the British Pharmaceutical Conference respectively, for the purpose of considering the relations as regards prescribing and dispensing of the two professions, and also the traffic in secret and quack remedies. Two members of this committee are members of the English Bar, so that the questions involved will be discussed with a due appreciation of the points of law involved.

Rapidity in Operating.

THE introduction of the employment of anæsthetics into surgery had results in addition to the prevention of the feeling of pain by the patient, which was the essential object of the invention. One great by-result was the extension of the operation to parts of the body which had previously not been considered accessible. But the introduction of anæsthesia had another effect, for it led to the lengthening of operations, as the surgeon had no longer to take into consideration the infliction of pain on the patient, and the speed of operating definitely decreased. In the ancient writers on surgery there is little reference to speed in operating. CELSUS appears to have been the first writer on surgery to mention the speed of operating, and he lays stress on the importance of not being moved by pity for the patient's pain to hurry the operation, and doubtless he meant that the due carrying out of the work required is of more importance than mere speed. AMBROISE PARÉ expressed himself as in favour of rapid surgery, but only when joined with experience. HEISTER in the seventeenth century claimed that the operator should be rapid but should not hurry. MORAND in 1772 urged that the phrase, "cito, tuto, et jucunde," should apply not to medicine only but to surgery also.

In the 50 years preceding the introduction of anæsthesia there was a tendency to increase the rapidity with which operations were performed, and in the hands of a few surgeons, especially skilful and dexterous, the rapidity with which an operation, even a major operation, could be performed was marvellous. Perhaps there was none who surpassed ROBERT LISTON in this respect, and when he performed in 1846 the first operation in this country under anæsthesia he amputated a thigh in less than two minutes from the commencement to the finish of the operation, for he did not expect much from the hitherto untried anæsthetic. The natural tendency, when the fear of causing pain to the patient was no longer present to incite the surgeon to rapidity, was to prolong the operation, and there has been a proneness since the introduction of anæsthetics rather to despise the rapidity with which the surgeons of a past generation operated. This feeling may go too far. There may have been a tendency at one time for surgeons to pride themselves on rapidity and to a certain extent to disregard the effect on the patient, but there can be little doubt that the tendency of the present day is to err on the other side. Many surgeons are far too slow at operations. They devote an unnecessary amount of time to small unimportant details, so that the duration of the operation may be twice that which was really needed, and the patient suffers. When the older surgeons performed their operations with lightning celerity they were thinking mainly of the feelings of the patient, but the rapidity with which the operation was done had another and even more important beneficial effect. The duration of the shock to the patient was greatly decreased. Nowadays, when the patient is under the influence of an anæsthetic, that portion of the shock which was directly due to the damage to the sensorium caused by painful impressions has been abolished, but the shock which is independent of sensation remains, and much of this is directly proportional to the duration of the operation. Even at the present time speed in performing an operation is no unimportant factor in the result. In so many cases the success or failure of the operation, its termination in the life or the death of the patient, rests on a very narrow edge, and small influences may precipitate the result on one side or the other. We have no doubt that lives may be, and are, lost by unnecessary dawdling during the operation. Even the prolongation of the anæsthesia is in itself productive of harm, and may help, in its turn, towards an unfavourable result.

We have quoted some of the references here given from an interesting article by Dr. R. T. MORRIS of New York, in "The Fourth Era in Surgery," in which he advocates strongly the need for rapid operation, and his earnest advocacy is, we think, needed at the present time. Speed is not everything. Accuracy is essential, and the operation must accomplish what it is intended to do. If a tumour and its adnexa are to be removed, removed they must be. If a limb has to be amputated, that which is necessary must be done, but much time may be wasted in unnecessarily doing more than requires to be done. All prolongation of an operation, even though it may be only measured by minutes, is an unnecessary prolongation, and though it may not lead to a fatal event its influence must be harmful. Safety lies in so adjusting the speed and the accuracy of an operation that neither is sacrificed. Much of the shock produced by an operation is beyond our control, but much rests within our hands, and that portion of the shock which is directly due to the length of the operation is that which it is in our power especially to minimise.

The Story of Pharmacy.

MODERN medicine and research are so fruitful, complicated and engrossing that medical men have on the whole little time for studying the records of the past, and the subject of the history of medicine and her allied sciences has been much neglected. But of late years a great stimulus has been given to the study of medical history by the foundation of the Fitz Patrick Lectures of the Royal College of Physicians of London, as those must feel who are reading in our columns the erudite and distinguished discourses of Sir CLIFFORD ALLBUTT. In addition to the Fitz Patrick Lectures, which have been delivered in previous years by Dr. J. F. PAYNE, Dr. NORMAN MOORE, and Dr. LEONARD GUTHRIE, we have seen produced recently such papers and essays as those of Dr. GUTHRIE on the Medical History of John Evelyn, of Mr. D'ARCY POWER on the Medical History of Pepys' Diary, together with his scholarly edition of John Arderne, and of Dr. RAYMOND CRAWFURD on The Last Days of Charles II. There are also various memoirs by the Regius professors

of medicine at the two Universities of Oxford and Cambridge, such as Professor OSLER'S papers on LINACRE, SERVETUS, and Sir THOMAS BROWNE, and those of Sir CLIFFORD ALLBUTT on Medicine and Mediæval Thought, to name only a few. Nor must we forget Dr. R. O MOON'S interesting little book on the Relation of Philosophy to Medicine. All this work, and we make no attempt to compile a comprehensive catalogue of it, has begun to familiarise medical men with medical history, and into the category of such books fall the valuable volumes on pharmacy[1] by Mr. A. C. WOOTTON, who died before his work made its appearance. The proofs were revised for publication by his friend Mr. PETER MCEWAN, the editor of the *Chemist and Druggist*. The book, whose title, "Chronicles of Pharmacy," is, as the author acknowledges in his preface, somewhat misleading, was originally intended "to trace back to their authors the formulas of the most popular of our medicines, and to recall those which have lost their reputation. ..... But I have not succeeded in this design." Instead, however, we have a book full of learning, of the results of laborious research, of out-of-the-way knowledge, and of facts bearing upon a universally diffused aspect of human nature, in which incredulity and trustfulness are singularly mingled.

From the dawn of history the universal desire of the sick has been to "take medicine." And medicine, it should be remembered, does not in its strictly etymological meaning imply simply a drug or an application, but any form of treatment applied or supplied by the medicine man—i.e., the wise man or he who knows. The Latin words, *mederi*, *medicus*, *medicina*, go back to a root meaning "wisdom," and the same root appears in Medea, the witch or the wise woman. The Greek word from which our word pharmacy is derived—namely, *φάρμακον*—means a charm or a counter charm, and is etymologically connected with a Lithuanian word, meaning "to sing," like the Greek *ἐπαοιδή*. The earliest method of treatment, whether for good or evil, was a song, such as the well-known example in the Odyssey, XIX., 457, where the blood from ODYSSEUS' wound was stayed by an *ἐπαοιδή*; and the power of music to charm away physical ill is a belief to this day among primitive peoples. The knowledge of drugs and medicinal herbs was probably acquired much later in the history of the human race than when medicine consisted chiefly in magic. As to how it was first obtained it is useless to speculate, but once the knowledge had been acquired that certain plants and herbs possessed certain properties the beginnings of pharmacy were at hand. The extraordinary collection of animal remedies in which our ancestors delighted most likely arose from the doctrine of similars. Thus, the flesh of a lion made the eater brave; the fox was a swift animal, therefore its lungs were good for diseases of the lungs, and so on. But in some of the prescriptions there was a certain amount of sense and sound physiology, accidental though this may have been. Thus, a favourite mediæval treatment for dropsy was for the patient to drink his own urine, and it is not so many years ago that urea was introduced as a diuretic. The essence of urine, which Mr. WOOTTON quotes Madame DE SEVIGNÉ as taking, probably owed its virtues to ammonia salts. With all the changes in medicine and pharmacy, the names of some preparations have remained practically the same, for we still use the terms cathartic, trochiscus, cataplasma, and emplastrum, although such names as hiera, arteriaca, and tiriaca are practically obsolete. ISIDORUS HISPALENSIS, a seventh century encyclopædist, gives an account of medical preparations as existing in his time and why they were called by varying names. The passage is in the fourth book of his "Liber Etymologiarum." A large number of pharmaceutical preparations formerly began with the word "dia," which has survived to this day in the term diachylon. "Dia" meant from, or of, and ISIDORE gives examples such as "diaspermaton," which is so called because it is made from seeds. As time went on it came to be considered that the value of a preparation consisted chiefly in the number and variety of the drugs which it contained, and down to 1746 the Four Officinal Capitals were still recognised: they were Mithridatium, Venice Treacle, Philonium, and Diascoridium, which contained upwards of a hundred ingredients. After reading of such amazing prescriptions it is with satisfaction that we learn they are now represented by pulvis catechu compositus, which, however shorn of dignity, may still compare in value with its predecessors.

No one in reading these records of the past, to which we have just made completely desultory reference, can fail to be struck by the complicated composition of ancient remedies, a complication which naturally went hand in hand with the idea that medicine was a mystery which should not be communicated but to the initiated. Nowadays the tendency is all the other way. The simplification of pharmacy and the mass of "elegant" and easily-taken pharmaceutical preparations has certainly been no small factor in the fashion of self-medication, and the most powerful drugs can be and are daily bought in open market by the public, who drug themselves and their friends with a sublime disregard for any untoward circumstances which may ensue. That the medical profession should be a loser pecuniarily by this custom is at least one of the evils arising from the practice. It is also open to question whether the tendency in modern prescribing to set aside the canons of the older method regarding adjuvants, correctives, and the like can be altogether approved. Polypharmacy is an abomination, but it is a fact that a judicious combination of drugs often acts far better than any individual drug employed by itself. Dover's powder, Griffith's mixture, Gregory's powder, and black draught are examples of old-fashioned pharmacy which have held their ground against all adversaries. A study of Mr. WOOTTON'S book will remind the thoughtful reader that if there was much in the practice of our ancestors to be avoided, there was also much to admire.

[1] Chronicles of Pharmacy. By A. C. Wootton. London: Macmillan and Co., Limited. 1910. Two vols. Pp. 428. Price 21s. net.

THE Richard Middlemore Lecture for 1910 will be delivered at the Birmingham and Midland Eye Hospital on Thursday, Dec. 1st, at 4 P.M., by Mr. Sydney Stephenson, ophthalmic surgeon to the Queen's Hospital for Children, London, who has taken as his subject, "The Consequences of Eye-Strain." All qualified members of the medical profession are invited to be present.

Annotations.

"Ne quid nimis."

THE FIFTH INTERNATIONAL CONGRESS FOR THE BLIND.

THERE are many scientific congresses held which supply a pretext for a journey, and of all such congresses it would be difficult to find one with more inducements to medical men than an international congress to consider the amelioration of the lot of the blind. The Fifth International Congress with this object is to meet at Cairo from Feb. 20th to 25th, 1911, under the distinguished patronage of His Highness the Khedive. The business sittings will be held at the University buildings under the presidency of the Minister of Foreign Affairs, but the Congress will be inaugurated by the Khedive in person. There are eight questions inscribed for discussion, namely: 1. When can a person be considered as blind? 2. How to prevent the spread of ophthalmia? 3. Has Esperanto been of any use as a universal language for the blind? 4. What is the best method applicable to all languages of teaching stenography to the blind? 5. What are the best trades and professions for the blind? 6. What are the best games and bodily exercises for blind school children? 7. Can the Braille method be improved? 8. Could the blind be employed in telegraph and telephone exchanges? These questions will be discussed in the mornings, and only short speeches are to be allowed. Reports must be sent in by Dec. 1st, so that they may be printed before the Congress meets. In the afternoons the members of the Congress will be conducted to the Museum of Egyptian Antiquities, to the mosques, to the Delta barrage, to the Arabic Museum, and the mosque of El-Azhar. There will be an excursion to the Pyramids of Giza and a lunch and a banquet. The entrance fee is the usual one of 20 francs, or 16s., and intending members should write to the secretary-general of the Congress at the University buildings. The card of membership entitles the bearer to a 50 per cent. reduction of the fare on the Egyptian Government railways, free admission to museums, monuments, and reduced rates at some hotels and on some of the steamships from Europe to Egypt. This then is an excellent opportunity of seeing Egypt under economical conditions, and at the same time of rendering some service to the blind. Indeed, those who are seeking a pretext to avoid the rigours of a northern winter will be tempted to persuade themselves that they have taken a special and life-long interest in the conditions of the blind. Egypt, of all countries, suffers most from eye diseases and blindness, therefore a visit to that country will create interest in the question among those who had not thought much about it before. We therefore wish the Congress every success, both as to the outcome of its deliberations for the amelioration of the conditions of the blind and as to the enjoyment of its members.

SCENT IN TOBACCO.

WE may well inquire on what ground the great bulk of the tobacco smoked by the people is scented. Foreign flavours are present sometimes in nauseating excess and the fragrance of pure honest tobacco is to most smokers a mere memory. We are quite prepared to be told that the public like, or even prefer, a scented tobacco, and therefore the trade must be ready to meet the peculiarities of its customers. If that is the case, the palate of the public, for some reason or other, must have gone astray, which is a pity, since a vitiated taste quickly invites bad trade practices. It is pretty certain, at any rate, that if the real demand of the smoker is in favour of a highly scented tobacco it matters very little what the quality of the tobacco is. He does not seek the pleasing qualities of the tobacco itself, unadulterated, unoiled, unscented: he is satisfied with an added scent which is not due to tobacco at all. To him tobacco merely serves the rôle of a smouldering vehicle, his choice of a brand being based upon a scent which is foreign and artificial. Depraved taste may be traced, we think, to the action of the trade in the first instance, and to the meek and weak attitude of its patrons. The matter is one of some importance, because a consideration of it naturally suggests the possibility of foreign materials in tobacco which may give additional risks to the smoking habit. The word adulteration may be objected to, but it is difficult to avoid its use in view of the fact that large quantities of foreign scents, besides oils, glycerine, formaldehyde, or other preservatives, are added to tobacco. Our view is that it would be better if the tobacco manufacturer kept no account with the drysalter and chemist.

PROGRESS IN KOREA.

UNTIL the last few years but little was generally known about the "Hermit Kingdom" of Korea, called by its inhabitants the land of the "Morning Calm." Since the conclusion of the Russo-Japanese war the vigour and activity of the Japanese nation have been manifested in many ways, but perhaps in none more striking or more beneficial than in its relations with Korea. For many years previously Japan had been trying to induce her neighbour to adopt modern methods of administration, and in 1905 a convention was concluded by which a Japanese Resident General was stationed in Korea, with practically complete control of the administration of the country, Japan undertaking to maintain the welfare and dignity of the Korean Imperial family. Since that date the progress of the country has been remarkable. In place of an almost universal system of corruption in the central and local governments, with complete stagnation as regards productive industries, improvement of means of communication, education, and sanitation, we now find a complete change. The policy of the "open door" has been adopted; the mineral resources of the country are being developed with the aid of foreign capital; railways, roads, and bridges have been constructed; a postal, telegraph, and even telephone system installed, including also a complete system of post-office savings banks. Nor has the public health of the country been neglected. Within a few months of taking over the internal affairs of the country vaccination was introduced, some 50 Japanese physicians being distributed through the various provinces to carry this out; the number of small-pox cases has decreased, but it is too soon yet to form any accurate estimate of the improvement that has been effected. During the last year a large distribution of vaccine prepared at the Government laboratory has been made; and female vaccinators are being trained to meet the objection on the part of Korean women to contact with strangers of the male sex. General sanitation in Korea had been absent. There was no system of refuse disposal, and well waters were everywhere polluted. Municipal organisations were set on foot, that at Seoul, the capital, started in 1907, being a joint undertaking of the municipality and the Japanese settlement. It seems that already a considerable improvement has taken place, the city presenting quite a new aspect. In the same year several charity hospitals were established. A Government hospital and medical school on a comparatively large scale have been inaugurated at Seoul, the most healthy location on Madzusan Hill having been selected for its site; provision has been

made for gynæcological cases, diseases of the eye, ear, and throat, in addition to ordinary hospital wards; also isolation accommodation has been provided for infectious diseases; a charge is made to those who can afford to pay, and free treatment is given to those who cannot. A medical school is attached, the staff consisting of Japanese and Korean medical men and one American physician. At the present time waterworks are in course of construction for Chemulpo, the port of Seoul, and at Fusan, on Broughton Strait, the principal port of communication with Japan. These undertakings are expected to reach completion at the end of the present year. Perhaps no more striking example of material improvement on scientific lines, skilfully designed and energetically carried out, has ever been afforded, even in the history of British or American enterprise. We are justified in hoping that the state of Korea will now in great measure be free from the devastating plagues that are the common lot of many oriental populations at periodic intervals. It is no exaggeration to say that civilisation owes a debt of gratitude to the Japanese nation for using their strength not tyrannously, but for the good of the people committed to their charge.

TOXICOLOGICAL TESTS FOR COLCHICINE.

THE small amounts of organic poisons recoverable from bodies after death in some cases of poisoning render the tests for these substances and their delicacy matters of very great importance in medico-legal practice. Some vegetable poisons, such as strychnine, veratrine, atropine, and physostigmine, are more or less satisfactorily recognisable by chemical tests alone, whereas for others, such as curarin, muscarin, nicotine, aconitine, abrin, and ricin, chemical reactions are not by themselves sufficiently characteristic for small quantities, and it is necessary to have recourse to biological tests. For the chemical tests a larger quantity and a greater degree of purity are necessary than is the case for many biological reactions. Colchicine is a substance with very definite toxic properties, and it is therefore of importance to study it from a toxicological point of view. It gives certain chemical tests, which are characteristic if a sufficient quantity of the substance is available. An interesting paper on this subject appears in the *Archiv für Experimentelle Pathologie und Pharmakologie*, Vol. LXIII., p. 356, by Dr. Hermann Fühner. He finds that colchicine occurs in varying quantities in different parts of the colchicum plant. It is most abundant in the seeds, where it is present in quantities varying from 0·2 to 0·4 per cent. The corm contains from 0·08 to 0.2 per cent., and the flowers and leaves from 0·01 to 0·03 per cent. In regard to the toxicity of colchicine 3 milligrammes in a single dose have proved fatal in man. Herbivora are more resistant to its action than other animals. Jacoby gives the toxic doses by subcutaneous injection of crystallised colchicine (containing 30 per cent. of chloroform) as 7 milligrammes for rabbits, 1 milligramme for dogs, and ½ to 1 milligramme for cats per kilo of body weight in each case. Frogs show an extraordinary resistance, since they can bear as much as 60 to 100 milligrammes. This is, however, only true of pure colchicine. Commercial colchicine often contains a substance called oxy-dicolchicine, the result of the action of light and air upon it, and frogs are more susceptible to this substance. Certain observations by Obolonski and Ogier show that colchicine resists for several months the putrefactive processes occurring in dead bodies containing it, a point of considerable importance medico-legally. It is, however, stated that certain putrefactive products may show chemical colour reactions similar to those given by colchicine. Dr. Fühner therefore maintains that it is necessary to apply biological tests as well as chemical in order to demonstrate conclusively the presence of small quantities of this substance. The most important colour reaction of colchicine is that given with concentrated nitric acid; violet and green colours appear, then gradually fade and pass into yellow. This yellow solution with an excess of caustic potash gives a cherry- or orange-red. Dr. Fühner describes a modification of this reaction which is sensitive for quantities between 1-100 and 2-100 of a milligramme. The solution containing colchicine is evaporated to dryness in a glass and the residue is dissolved in three drops of concentrated sulphuric acid, which gives a yellow solution. A glass rod which has been dipped in concentrated nitric acid is drawn through this solution, when the characteristic violet colour appears. If only small quantities of colchicine are present the colour soon fades completely. Caustic soda or potash is then added, and at the junction of the two fluids a cherry-red colour appears. Zeisel's ferric chloride test was found to be less delicate than this; however, a modification employed by Dr. Fühner gave satisfactory results, but its limit of sensitiveness lay between 2 and 5 milligrammes. The method consists in heating from 3 to 5 cubic centimetres of the solution to be tested with five drops of dilute sulphuric acid in a hot-water bath for half an hour, and then adding ferric chloride solution, drop by drop, so long as the green colour which results becomes darker. The fluid is then cooled and a third of its volume of chloroform is added. On shaking, the chloroform becomes coloured from yellow to garnet-red, according to the amount of colchicine present. After injection of colchicine into cats symptoms do not appear until several hours, and death does not occur until at least six or seven hours after injection. For the small quantities recoverable from bodies after death Dr. Fühner suggests the use of white mice, the fatal dose for animals between 15 and 20 grammes weight being between 1/50 and ½ a milligramme. The symptoms of poisoning by colchicine consist in sickness and diarrhœa, death resulting from respiratory failure. Dr. Fühner also found that the susceptibility of frogs to this poison was much increased by raising the temperature at which they were kept.

QUARANTINE AT MALTA.

FROM statements published recently in the *Malta Herald* it appears that serious complaint has been made against the Government for conniving at evasion of the existing quarantine regulations by certain officials and privileged persons. Special prominence is given to the case of an English military officer and his wife who travelled from England through Italy by rail to Naples, where they took ship for Malta. On arrival at their destination they at once received free *pratique*, although their fellow passengers, including at least one Maltese officer, had to comply strictly with the five days' quarantine imposed on all arrivals from Naples. The Maltese opinion is that this officer and his wife, by evading the forced detention for the prescribed period, exposed the inhabitants of the island to the serious risk of having cholera introduced among them. In this view, however, we are unable to concur, for we do not believe that cholera can be kept out of Malta or anywhere else by quarantine. It is to perfect sanitation that we must look, so that if the germs of the disease are conveyed to the island they may not find a soil on which to multiply and produce their epidemic crop. Five days' detention, for instance, will not prevent a chronic carrier of cholera from bringing with him the microbes of the disease into Malta, but proper sanitation will prevent his discharges from contaminating water and food-supplies. Hence we believe that the modern method of medical inspection of fresh arrivals from infected ports, together with the taking of names and addresses to which the passengers can be

followed, and their health supervised if necessary by the local authority during the necessary period, will meet all requirements—so long, that is, as the sanitary circumstances of the locality are satisfactory. We are well aware that these precautions just mentioned, which have been now adopted by most of the Great Powers, are characterised in Malta as "derisory measures" in which no confidence can be placed. Apparently it is still believed by the Maltese people that cholera is carried about the person or by the clothing, and that detention, with all its discomforts on board ship or in a lazarette, followed by fumigations of wearing apparel, is absolutely necessary to prevent the spread of the disease. The Malta Government, it may be mentioned, when asked for its explanation of the reported evasion of the quarantine regulations by the officer and his wife, replied through the Acting Lieutenant-Governor that it reserved to itself the right to deal with such cases on their merits according to circumstances, and that the presence of the officer in question was urgently needed in connexion with his military duties. It cannot be denied that in some few instances medical inspection and the taking of names and addresses may not suffice, but for these cases special provision can be made. Dirty deck-passengers, for example, or panic-stricken pauper refugees fleeing from a cholera-infected district, might require special attention before being allowed to land on the island. Such persons probably would not be in a position to furnish trustworthy addresses to which they could be traced or where the local authorities could keep them under surveillance. For these, therefore, stricter measures may be needed, and for them some detention might be desirable. But for military officers, public officials, professional men, well-known residents, or visitors of responsible position, proceeding to addresses that are well known to the authorities, more particularly when such fresh arrivals have travelled first-class and have merely passed *en route* through an infected port, having had no chance of contracting infection, we regard five days' detention as not only wholly unnecessary, but also as vexatious and valueless. We trust, however, that the day is not far distant when the Maltese people, who have hitherto been too prone to panic, will see the folly of their present ways; and we hope that they will seek salvation in sanitation, forsaking finally the exploded and obsolete methods of mediæval quarantine.

TREATMENT OF HÆMORRHAGE IN THE NEW-BORN BY DIRECT TRANSFUSION.

IN the *Boston Medical and Surgical Journal* of Sept. 15th, Dr. F. S. Newell has reported a remarkable case in which hæmorrhage in the new-born was treated by direct transfusion. A female infant, the second child of healthy parents, appeared to be normal for the first 24 hours after birth. She then vomited half an ounce of bright-red blood. Three hours later, at 8.30 P.M., she vomited about 2 ounces of blood. Two other hæmorrhages occurred, and at 9.30 a large motion of meconium mixed with blood was passed. She was pale, but apparently in good condition, the pulse ranging from 130 to 135. It was thought probable that the hæmorrhages would not stop spontaneously and that whatever was to be done had better be done while the child was in good condition. It was decided to perform direct transfusion from the child's father, which was done by Dr. J. C. Hubbard. Owing to the small size of the child's veins the operation was difficult. The left popliteal vein was first exposed, but was found to be too small to permit union with the father's radial artery. The internal saphenous vein was then dissected out, and with considerable difficulty union was secured by the Elsberg cannula. The connexion was allowed to persist for 25 minutes, and the wounds were sutured and sterile dressings were applied. During the transfusion the child passed three large motions containing old and bright-red blood, but after this no further hæmorrhage occurred. The operation was so difficult that it took two hours before connexion of the vessels was established. After the operation the child's state much improved, the colour and the pulse being better. On the following day she seemed weak and listless, but otherwise was in a satisfactory condition; the temperature was 103° F. and the pulse 120. On the third day after the operation the temperature fell to normal. As the mother had no milk the child was fed on whey, which was gradually increased in strength until a full-strength milk-whey mixture was given at the end of three weeks. She was discharged from the hospital five weeks after delivery, weighing 9 pounds. Dr. Newell emphasises two points—the great difficulty of performing transfusion in the new-born on account of the small size of the vessels, and the prompt checking of the hæmorrhage as soon as the effect of the father's blood was noticeable. It was extremely difficult to keep the wound in the groin from being constantly contaminated by urine and fæces. Recorded cases seem to show that early cases of hæmorrhage in the new-born can be successfully treated by transfusion. On the other hand, the results have been unfavourable in cases of late hæmorrhage—i.e., in those occurring after the first week. This points to a pathological difference between the two conditions, and suggests that the late cases may be due to some septic process, in which case transfusion cannot be expected to be successful. The difficulty of the operation is such that it should be undertaken only by an expert surgeon.

"PERSECUTION MANIA."

A FREQUENT correspondent writes from Rome:—Only the pen that described for us Quasimodo's behaviour from the height of that basilica towards the tumultuous crowd below could do justice to a recent "sensation" in Rome—the siege of a madman in his own house, from which, for well-nigh 48 hours he defied the police, the fire brigade, and even the military to dislodge him, keeping up an intermittent discharge of musketry on the besiegers and the crowd that thronged the street, till at length, the water-hose having been plied in vain, he was "fumigated" into impotence like a wild beast in its cage, and consigned, in a strait waistcoat, to the "manicomio" of the Santo Spirito! Francesco Moncada, aged 45 years, a pleader of some distinction at the Roman bar, was a fair specimen of the Sicilian physically, intellectually, and morally, with the characteristics "good and not so good" of his fellow-islanders. With his wife and three children he had lived for some years in the Via Ottaviano, but of late his professional practice began to dwindle, to the manifest discomfort of his family and the depression of his spirits. On Sunday, Oct. 9th, he betrayed the first symptoms of the "mind diseased," announcing that he had been the prime agent in bringing about the fall of the Portuguese monarchy and that, from one minute to another, he was expecting the telegram which was to proclaim him President of the Republic. As the time wore on, he protested that there was a plot to get rid of him by poison, in dread of which he kept the house, wandering from room to room, armed with rifle, revolver, and "bastone animato" (sword stick). His wife and children tried to calm him, but in vain. He became furious and ordered them out of the house, suiting the action to the word. This was on Monday evening (the 10th). Madame Moncada had by this time informed the head of the Pubblica Sicurezza, who happened to be a friend of the family, and who tried by addressing him through the keyhole to bring him to reason,

but without effect. On the following day Signor Moncada pushed a letter under the door, which, on being picked up on the landing, was found to be addressed to the head of the Pubblica Sicurezza, and to convey among a tissue of rambling phrases the announcement that he had been condemned to death and that his life was threatened by the "rabble." The news by this time had spread far and wide that a dangerous lunatic had barricaded himself in his own house and the inevitable crowd was thronging the street below when suddenly it scattered in all directions to the cry, "il pazzo spara" (the madman is firing), women fainting, and the shops hastily shutting up as the "besieged resident" continued to discharge his rifle. Among the fallen was picked up a woman with a shot through the right temple, from which she died shortly after removal to the hospital, while two other women were hit and seriously hurt, and a carabineer had his coat perforated by a bullet. The fire brigade after perforating an upper floor of the tenement at various points pumped in jets of water which gradually made upon the madman, but still he was able to discharge rifle and revolver from the window, which he continued to occupy all night. Evidently the water did not incommode him, and so another plan was adopted. Strong fumes of sulphur from various holes in the roof were projected into the apartment, till through a chink in the wall he was seen to become stupefied, recovering himself, however, from time to time so as to be still "dangerous to be approached," as was found by two of the police who made their way into the room and barely escaped a couple of shots. Before he had time to reload, however, they threw themselves upon him, wrested his rifle from him, and after a desperate struggle overpowered and secured him. On appearing in the Via Ottaviano with their captive they were loudly cheered by the immense throng of people, through whom they passed with some difficulty, in a motor-car to the Santo Spirito. There, under treatment, the man has since come to himself, and on being told the incidents of the 48 hours of siege was filled with astonishment, protesting that he had "never fired a shot"! In fact, his mind was a *tabula rasa* for all that terrible time. Later in the day it was found advisable to keep him still in the "camicia di forza" (strait waistcoat) and to place him in a ward for the "furiosi" (violent patients), previously to removing him for further treatment to the Asylo Provinciale. No such case has been recorded in Rome since 1870, and that on a less tragic scale; the case, to wit, of a Papal Zouave who, under a similar hallucination, barricaded himself in a room in the barracks of the Campo dei Fiori from which he was not extricated till he had fired 50 rifle shots and wounded, though not fatally, many of his comrades.

VIEWS UPON HÆMOGLOBINURIA.

THE conditions in which hæmoglobin is passed in the urine have for many years attracted considerable attention. The pathogenesis especially has given rise to much discussion, and many theories have been propounded to account for the destruction of the red blood corpuscles. The disease is described briefly in text-books on general medicine, and numerous contributions on the subject are found scattered through medical literature. We have received a small work with the title "Hæmoglobinuria," by Dr. A. E. L. Charpentier,[1] in which an excellent *résumé* of the present knowledge in reference to the disease is given. Dr. Charpentier bases his observations on four cases of paroxysmal hæmoglobinuria which were under his own care, and in addition he has made a thorough search for the experience and conclusions of other writers as given in various medical publications. He adds to his book a comprehensive bibliography which should be of assistance to those who are interested in the many aspects of this morbid condition. After a careful review of the principal investigations which have been made more particularly into the symptomatology and pathogenesis of paroxysmal hæmoglobinuria, Dr. Charpentier gives a summary of the conclusions at which he has arrived as follows. He contends that a paroxysm of hæmoglobinuria occurs in a man whose blood is altered by syphilis, malaria, or some other condition, causing his blood to contain a potential toxin. The toxin in the serum consists of two parts—an intermediary body and complement, which only becomes active at a lowered temperature and subsequent body heat. Dr. Charpentier then remarks that some authors maintain that in these patients the circulation is slower than normal, and they have greater difficulty in keeping up the surface warmth; hence, on exposure to cold, the blood in the skin capillaries becomes cooled, a certain amount of stasis also takes place, when the complement and intermediary body unite with the corpuscles, which immediately undergo a rapid phagocytosis, the hæmoglobin being set free in the vessels. He thinks it is probable that the exposure to cold of the skin also causes the arterioles to be constricted by means of the "vaso-motor arc," and at the same time it is likely that either the presence in the blood of the toxin or of the free hæmoglobin will influence the system at large by means of the hormones. If the free hæmoglobin is above a certain proportion, the symptoms of hæmoglobinuria of varying intensity are induced, including the passage of hæmoglobin through the kidneys. Dr. Charpentier then points out that in these processes an enormous number of erythrocytes are destroyed, but are very rapidly reproduced. The kidneys, in excreting the hæmoglobin, become congested by the irritation, so intensifying the symptoms. The amount of pigment and urea is largely increased by the hæmolysis, and also adds to the disturbance of the functions. Warmth and rest, he says, allow time for the kidneys to recover, and probably for an antigen to form, when the hæmoglobin is excreted and the organs resume their natural functions. This little volume contains much that is interesting upon rather an obscure and rare condition, and Dr. Charpentier has rendered a service to medical literature in collecting and arranging the material which has hitherto been so widely scattered in books and publications in many countries.

[1] London: Baillière, Tindall, and Cox. 1910. Pp. 111. Price 3*s.* 6*d.*

THE SANITATION OF MADEIRA.

Dr. Michael C. Grabham, author of "The Climate and Resources of Madeira," writes us the following note which will be of interest to many of our readers and their patients:—The outbreak of typhoid fever which, it may be remembered, happened during the height of last season at Madeira, subsided as mysteriously as it commenced, no fresh case having been notified since the early days of the month of March. It will therefore be reassuring to both the visitors who from now onwards crowd the hotels and villas of these mountain slopes, and to their friends at home, to know that the island is once more healthy and inviting, and moreover, that drastic improvements have been accomplished during the recent months. New drains, new kitchens, and food-storage arrangements figure prominently among the latest developments, but pre-eminently to be mentioned is an adequate supply of mountain water, drawn in iron pipes at an elevation of 3000 feet from a region far above cultivated ground and human habitations. Messrs. Reid, the principal proprietors, have also started a special dairy for the supply of milk to their hotel guests which will add to the general security against disease. It is important to add that the new Republican *régime* has been accepted locally with even less

excitement than is usually evoked by political party change, and that the claims of Madeira, long neglected, will now be pressed upon the new Executive in the international interest of the place as a health resort, whose winterless and perennially vernal climate has now been brought within three days' journey of England by the sumptuous liners of the Union Castle Company. The overflowing revenue and prosperity of Madeira are truly due to these influences, and they cannot be too sedulously fostered in the interest of Portugal. Latterly Madeira has been by no means frequented by health-seekers exclusively, but the island is becoming more and more the resort of the tired and overworked—not of the average tourist, but of those to whom complete intellectual rest is impossible at home, who desire light and sunshine, and who seek distraction in fresh interests and new environment.

COCOANUT "MILK."

NOT a few people have wondered what kind of stuff the "milk" of the cocoanut is. The inducement held out to buy the nuts or "shy" for them is generally that they are "all milky." Recent analyses, however, have dissipated the delusion that the fluid has anything in common with real milk. It contains only 4 per cent. of solids, consisting chiefly of sugars 2·8 per cent., the balance being made up of mineral matter and tartaric acid. It is interesting to record that more than half of the sugar present is mannitol, the sweet principle of manna which is sometimes found also in wine as a product of normal grape sugar. The question has been discussed as to whether it would be profitable to extract the cocoanut water for the sake of its cane sugar, but as this amounts to only $\frac{1}{10}$th per cent. the process would not be commercially successful, in spite of the water being a waste product. Even if the water contained 5 per cent. of sugar, as some specimens appear to have shown, the recovery of this amount would be unprofitable. The juice of the sugar cane yields nearly 20 per cent. of sugar.

MATERNAL INFLUENCE IN MENTAL DISORDERS.

IN the annual report of the East Sussex County Asylum Dr. F. R. P. Taylor, the medical superintendent, records, as a result of inquiries made into the family histories of patients under his charge, that in 247 of 277 direct admissions a family history was obtained, and that heredity was ascertained in 28 per cent. of the males and 43 per cent. of the females. It would be both of interest and practical importance to learn if these figures are similar to those obtaining in the statistics of other institutions. It is perhaps natural to expect that a tendency to insanity in the mother is more likely to appear in her offspring than is a tendency to insanity in the father likely to appear in his. The nervous system of the child is in part elaborated in utero in a period during which the mother herself is peculiarly liable to mental disorder, sometimes slight, sometimes serious in its manifestations, and in part during those early years when the maternal influence is paramount. If that influence, whether within or without the womb, is good it is well with the child, but if, on the other hand, it is for some reason not good the offspring, *pari passu*, is affected. The life-history of women is bound up to a far greater extent than is that of man with matters of generation. It is a common observation among physicians, and indeed amongst lay folk as well, that the menstrual flux is very frequently preceded by, accompanied with, and succeeded by peculiarities of mentality, and that therefore in many women mental equilibrium is scarcely known, and is replaced until middle life by tones of feeling, effectivity, and thought in perpetual see-saw. It is scarcely to be doubted that such states as these exercise subtle educative influences and may result in just those failures in mental balance which may subsequently dispose the offspring to mental breakdown. From another point of view it is to be remembered that certain affections seem to be transmitted through unaffected female progenitors to male offspring, and it is at least legitimate to regard it as possible that in other disorders a like tendency exists, while it would be interesting to investigate the characters of the insanities which appear to be of maternal origin and to compare them with those which appear to be of paternal origin. There can be no doubt that within a comparatively few years our generation has seen a metamorphosis of the character of the lives led by women; such a change indeed as history does not record. It is full early to pronounce on the effects which are likely to accrue, but it is plainly of vital importance that we should watch the direction of the drift of those few straws which too often are our only guides, and we should regard with satisfaction a further development of Dr. Taylor's observations.

THE TREATMENT OF TUBERCULOSIS ON THE MEDITERRANEAN COAST: HELIOTHERAPY.

AT a meeting of the Académie de Médecine of Paris on Oct. 11th M. Debove made a report on a paper by Dr. Révillet of Cannes, entitled "The Treatment of Tuberculosis in Children on the Mediterranean Coast by Sea and Sun." Though the topic may seem trite the results are so remarkable as to demand attention. They are more trustworthy than the usual "excellent results" of therapeutics, for the undue optimism which, however honest, seems inseparable from writers who are describing the results of their own methods can be excluded. Here the patients were Swiss children sent from Geneva to Cannes by a philanthropic society. Before departing and on returning they were examined by Professor d'Espine, and the results are given in an annual report. It is noteworthy that, in spite of the proximity of their own renowned mountain sanatoriums, the Swiss should prefer to send these children to the Mediterranean. Cannes possesses great advantages which has led Professor d'Espine to recommend it, but these exist almost equally all along the coast between Hyères and Vintmille. It has a sloping sandy beach protected from cold winds on the north, east, and west by mountains and open only to the south—an ideal condition for the treatment of tuberculous children by sea, air, and sun baths. The band of Swiss children arrives each year in the middle of October and remains until about the middle of June. Any who show signs of "open" tuberculosis are rejected because of the danger of contagion. At the time of arrival the sea is warm, having a temperature of about 64° F. As winter approaches the temperature falls to 46°. The children bathe daily and do not notice the fall of temperature. The sea bath is always short, lasting from one to three minutes at most. A marked cutaneous reaction always results and there has never been the least accident. The bathing is continued through the winter even during the coldest month. The greater part of the day is devoted to heliotherapy; the tuberculous part is exposed naked to the rays of the sun. Sunless days are so few in this fortunate clime that sun bathing is possible for 190 out of the 240 days of the children's sojourn. The reverse holds in mountain climates; sunny days are the exception. The effects were striking. Pale, emaciated children, many of whom were subjects of severe disease, underwent a veritable resurrection. Appetite, colour, and spirits returned. The average gain in weight was 4 kilogrammes. For superficial tuberculous glands insolation proved most efficacious; it dried up suppuration and reduced the keloid-like projections and depressions. Progress was rapid and the surface became covered with a

supple scar which assumed the colour and characters of normal skin. Old glandular sinuses, which resisted all previous treatment, rapidly closed. Of 63 children suffering from Pott's disease 27 were cured, 26 were improved, and 6 remained stationary. Four died—three from an intercurrent disease and one from exhaustion the result of prolonged suppuration complicated by amyloid kidneys. Of 94 children suffering from hip disease and "white swellings" 38 were cured and 50 were improved. Professor d'Espine found that a certain number of children suffering from hip disease were completely cured after treatment for eight months at Cannes—a result exceptional at other latitudes. The results were not less brilliant for "white swellings," in the treatment of which immobilisation was avoided. Dr. Révillet considers that rest treatment is much abused and is the cause of ankylosis and muscular atrophy. In a number of cases "spina ventosa" was rapidly cured by exposure to the sun. In tuberculous peritonitis effusion and meteorism rapidly disappeared; in 7 cases 3 patients were cured, 3 were improved, and 1 died from perforation. In 11 cases of lupus, 8 patients were cured and 3 were improved. The diseased surface was gradually exposed to the sun until a stage was reached when the treatment could be continued for the greater part of the day. Progress was rapid; nodules were effaced, crusts fell, slight desquamation was produced, and islets of white skin were formed. Finally, a smooth supple scar, never keloidal, was produced. To sum up, in 888 cases of tuberculosis positive results were obtained in 93 per cent., and cures in 52 per cent. It is to be noted that these results are not merely the statement of Dr. Révillet about his own methods, but are vouched for by Professor d'Espine. What lesson do they teach? In this country the open-air treatment of tuberculosis has become a commonplace, but we think that the value of heliotherapy, particularly of exposure of the diseased part to the sun, is not sufficiently appreciated. Though for this purpose England is inferior to the Mediterranean littoral, it should not be forgotten—and our frequent meteorological notes prove it—that we have many places on our southern shores where the daily aggregate of sunshine is considerable.

THE HISTOLOGY OF THE SCARLET FEVER RASH.

THE histological characters of the exanthem of scarlet fever form the subject of an interesting paper contributed to *Medicinische Blätter* of Oct. 22nd by Professor J. Hlava of the Bohemian Pathological Institute of Prague. He states that the most important previous observations on this subject are those of Neumann and Unna. Neumann described swelling of the cells of the rete and the formation of gaps and networks in which wandering cells were enclosed. Unna maintained that the swelling of the skin resulted from the hyperæmia of the vessels of the corium, and that the changes in the epithelial layer were but slight. Professor Hlava's observations were made upon the skin of 18 fatal cases, and also on small pieces removed *ex vivo* in seven other cases. He concludes that the chief changes occur not in the horny or granular layers of the epidermis, but in the cylindrical and prickle layers and in the corium. There is a hyperæmia associated with œdema. The œdema extends into the epithelium and may penetrate through the granular layer to form small vesicles in the horny stratum. In the epithelium small areas of softening may result from imbibition or from necrosis. These areas may involve groups of prickle cells, the disorganisation starting at the periphery of the cells and extending in towards the nuclei, which become disintegrated. The central cells of these areas of softening may show the changes to a lesser degree, the protoplasm being simply homogeneous and the nuclei pyknotic. A few polymorphonuclear leucocytes may occur in and around these softened areas, but this leucocytic invasion is at most slight. Some dilatation of the lymph channels of the papillary layer with enlargement of the endothelial cells can be seen even before the appearance of the rash, and they may contain some débris of red blood corpuscles. On the first day of the eruption mononuclear cells with a few polymorphonuclears occur around all the blood-vessels of the corium, but even by the fourth day there is very little proliferation around these vessels. No changes of any kind are discernible in the sweat or sebaceous glands. The appearances in fatal cases are somewhat different. The epithelial cells contain more pigment; hæmorrhages and connective tissue cells containing pigment are much more common in the corium, and the cell proliferation around the blood-vessels is more marked. These differences are probably referable to the hæmorrhagic character of most of the fatal cases. Professor Hlava concludes that the hyperæmia, the serous effusion, the leucocytic changes, and the later cell proliferation about the blood-vessels are in favour of the inflammatory nature of the process rather than of the view that it is a simple toxic œdema.

THE Lord Mayor has become chairman of a Mansion House committee formed to promote the raising of a fund for the erection of a new building for the Royal Society of Medicine, which already possesses a splendid site.

A POWERFUL claim has been made by the Society of Tropical Medicine and Hygiene for the endowment of the study and prevention of tropical disease as a memorial to his late Majesty King Edward VII.

THERE has been praiseworthy activity during the week in the districts where plague-infected rats have been found, but evidence of a spread of the infection has been forthcoming.

WE regret to announce the death of Professor Lancereaux, which has just occurred at the age of 80.

ROYAL MICROSCOPICAL SOCIETY.—The next meeting of this society will be held on Nov. 16th at 8 P.M., when there will be an exhibition of specimens of British mycetozoa by Mr. A. E. Hilton.

THE NOTIFICATION OF OPHTHALMIA NEONATORUM.—The Midwives Act Committee on Nov. 8th asked the London County Council to take action with a view to the more effectual prevention of blindness or impairment of vision caused by the want of prompt and efficient medical treatment among newly born infants, and recommended the compulsory notification of all cases of ophthalmia neonatorum. So far as the practice of certified midwives was concerned, the committee stated, a method of notification already existed, as one of the rules of the Central Midwives Board required every certified midwife to advise that medical assistance should be obtained in every case of inflammation of the eyes, however slight. If the Council made the order the information obtained would enable the medical officers of the sanitary districts to make known to those concerned the opportunities available in necessitous cases. It would be found of value where the infant was taken to a hospital, where the medical practitioner perhaps would not have an opportunity of keeping the infant under treatment, and it would serve a useful purpose incidentally in bringing to light cases attended by midwives concerning which they had omitted to advise that medical aid was necessary, and to inform the Council accordingly. Notification would render more complete the arrangements for securing continuous and efficient treatment of the child. The order would be advertised and a copy sent, as directed by the Public Health Act, to each qualified medical practitioner residing or practising in the county. The Council decided to make the compulsory notification order.

THE SCHOOL CLINIC AND THE LONDON COUNTY COUNCIL.

(FROM A SPECIAL CORRESPONDENT.)

THE debate at the London County Council on Nov. 1st concerning the medical inspection of school children and the letter of the Board of Education thereon turned very largely upon the question of treatment. The article on the medical inspection of London school children published in THE LANCET last week mentioned that the Council appeared ready to revise its present system of medical inspection and treatment, and this is certainly so. The necessity of the school clinic was touched upon by every speaker on the Progressive side, while from the Moderate side only Mr. Cohen and Mr. Cyril Jackson essayed to speak in favour of the hospital system of treatment. Mr. Cohen buttressed his defence of the Council's method by calling in evidence generalities about the charitable motives and good emergency work of the hospitals, but the relevancy of his remarks was somewhat vitiated by the fact that it was not the hospitals, but the Council's arrangements with them, which formed the subject of criticism.

The defence of Mr. Cyril Jackson, chairman of the Education Committee, was remarkable for its moderate tone. Mr. Jackson did not endeavour to deny that mistakes had occurred in the working of the hospital treatment scheme, but suggested that similar mistakes would have been inevitable even had a system of school clinics been established. And the further interesting suggestion was made, in the form one could not help thinking of a broad hint, that when the present hospital arrangements come to an end this year, the whole matter will come up for reconsideration.

The arrangements made by the London County Council embrace, among others, Charing Cross, Great Ormond-street, the London, and King's College hospitals, but exclude such important institutions as St. Thomas's, Guy's, St. Bartholomew's, Westminster, and University College. Quite apart, therefore, from the question of whether hospital treatment is suitable for school children as such, the County Council's arrangements were almost inevitably bound to be subject to serious faults in working. For instance, children living practically under the walls of a hospital with which no arrangements have been made by the Council have been sent miles away to another hospital for treatment under the scheme. Then some parents who have taken their children to a hospital directly after a medical inspector had indicated to them defects which required remedy, have been given an emergency treatment and told to apply to the head teacher of the school for a London County Council voucher entitling to further treatment. But the head teacher is not supplied with these vouchers, which are only issued after a delay of some weeks by the Education Office. The delay has the purpose of allowing the parent to provide treatment by his own endeavours, but in the cases cited it has the practical effect of considerably delaying treatment, frequently of rendering the emergency treatment futile, and of exasperating the parents and teachers alike.

The question of payment further complicates matters. The parent of every child treated at a hospital under the London County Council scheme must be assessed to pay for the cost of such treatment. So that after having been first delayed and subjected to waste of time and annoyance, the parent is secondly presented with a bill for treatment at a hospital at which his children formerly attended free, and at which they still attend free if under or above school age. And the parent is asked to pay notwithstanding any contribution he may have made to the hospital through his club, place of business, or personally, and despite any gift which he may make to the contribution boxes while actually attending the hospital.

Miss Adler, in a well-balanced speech, made this injustice clear and suggested further that the fee charged to parents was too high, and, in the case of a parent with several children needing treatment, more than a weekly wage-earner could be expected to pay without serious hardship. Another of the points made in the discussion was that some at least of the defects and diseases discovered by inspection are not such as the hospitals can conveniently tackle. The treatment of discharging ears, needing constant syringing twice or thrice a day by a nurse, is not a treatment for which the hospitals have either time or staff, while the treatment of discharging ears at home is admittedly liable to irregular intermissions, disregard of aseptic precautions, and lack of efficiency generally. Then there is the question of the operation for removal of tonsils and adenoids. This operation is rarely performed by the general practitioner on any but the wealthier among his patients, whereas the hospitals have more of this particular work than they can conveniently manage. In consequence there arise from time to time, cases where the children, after operation, have to be sent home by tramcar or omnibus in a condition, as Miss Adler said, unpleasant to themselves and to all who see them.

Both of these groups of defects and diseases appear to call for treatment in special school clinics. Much the same considerations apply to dental treatment, ringworm and other skin diseases, and also to those slighter degrees of dulness, nervousness, anæmia, and digestive troubles which are serious from the point of the teacher and school medical officer, but which, by comparison with the more acute and severe affections, do not, from the hospital point of view, warrant detailed and continuous treatment. A further consideration arises when the question of continuity of treatment in general is considered. There is, to begin with, no method of correlation of the hospital treatment and the school medical officer's inspection. The hospital does not accurately know what has been diagnosed by the school medical officer, nor in relation to what special school conditions. Nor does the school medical officer know in what way his diagnosis is being followed up by treatment.

Although the London County Council pays the hospitals, and the parent may have to pay the London County Council, there exists no way in which the parent can be compelled to continue regular attendance at the hospital with his child until the child is discharged cured. No organisation but that of a school clinic where the medical information gathered in school will be at the disposal of the physician or surgeon of the clinic, and where the attendance of the child can, if necessary, be compelled by use of the school authority, can get over these difficulties. This is particularly obvious when we examine the cases of the children of destitute or demoralised slum-dwellers who present a large proportion of defects. Among this class of case regularity of attendance at a hospital is a great rarity, even in severe cases. The parents will not, or often cannot, afford the time necessary to attend an ordinary out-patient department. For this reason children have been found in the schools suffering from tuberculous disease of the hip, with discharging sinuses, severe middle-ear disease, extensive (if under the clothing) skin disease, phthisis, and heart disease. Under existing conditions the children of this demoralised slum class do not and cannot get adequately treated, however great the efforts of individual hospitals and individual surgeons and physicians.

The debate at the London County Council on Tuesday made it abundantly clear that the treatment of the mass of defects and diseases discovered by medical inspection must be the work of a school clinic. Mr. Hobson, in addition to his carefully critical speech on the inspection question, Mr. Frank Smith, and every other speaker on the Progressive side, emphasised this point of view.

In connexion with any system of school clinics organised in London the hospitals must necessarily play a large part. There will be, in the first place, those cases discovered at school, which are too acute, or too severe, or require too specialised a treatment to be dealt with at the clinic. There will also be those cases where the parents of the child prefer to make their own arrangements with a hospital. Again, some of the special hospitals and special departments of hospitals could be arranged with so that what, in fact, would be clinics for school children within the walls of the hospital building could be organised. This applies to refraction, dental, nose, throat and ear, and chest cases. Where a special hospital or department exists in a district conveniently situate as regards surrounding schools, there seems every reason to think that suitable special arrangements could be made within the limits of the school clinic organisation, and as a part of that organisation.

The effect of the setting up of school clinics would be materially to disembarrass the out-patient departments of the hospitals, while more effectually treating the diseases found in school children. The effect on the private practitioner

would be in any case slight, as the organisation suggested amounts only to a redistribution for treatment purposes of the hospital population. It is even probable that in the redistribution the private practitioner would gain more than he would lose, while the school clinic would be a local organisation of service to him in cases requiring more continuous treatment than he could give, as in cases of discharging ears or minor surgical operations which it is impossible to undertake in poor homes and which now go to hospital.

THE MOTOR EXHIBITION AT OLYMPIA, LONDON.

By C. T. W. HIRSCH, M.R.C.S. Eng., L.R.C.P. Lond.

(*Concluded from p. 1364.*)

THE Ninth International Motor Exhibition is one of the finest representations of cars and accessories that have been held; but from the reporter's point of view it does not come up to the exhibition of 1908, in so far as that there is no striking new "copy-producing" feature such as the bomb which the Silent Knight engine then exploded on the public. Still, the show is certainly a worthy successor of the excellent ones that have preceded it. Buying a motor mount is, of course, not the same as the purchase of, say, a Gillette razor, for with the latter the blade, on account of its cheapness, can be thrown away when worn out. Such is not usually the case with a car, and it is therefore an advantage for intending purchasers to visit the exhibition, where they can see the many types of vehicle fitted for professional use, and consider the difficult question of which one is most suited for their individual needs. And yet, though I advise would-be buyers to go there to choose a car, I rather pity the layman who attempts to do so, because so many makers are represented by such good agents, and so many cars are so excellent, and are said to be so suitable for doctors, that the selection must indeed be a difficult matter. The one point above all others that should, I venture to submit, be kept in view by those who belong to what is known as "the motorists of moderate means class," is that the expenses of motoring are largely dependent on the load that is carried, and that there is much in favour of the light two-seater with hood and front wind-screen, at any rate for the doctor who is his own chauffeur. As to the number of cylinders, the tendency is in favour of four. Of course, there are many six-cylinders: probably more than there were last year. But for power, fair silence, and simplicity and efficiency the four-cylinder comes up to the requirements of most people, and a good many, I think, might with advantage, anyway in their early motoring days, be content with a single "lunger" like the De Dion, Rover, Swift, or Cadillac, though, of course, they do suffer in the matter of engine vibration on comparison with a four-cylinder.

Mr. Lloyd George has done good to motoring and motorists. His taxes on horse-power based on the bore and discarding the stroke are responsible for the number of smaller powered cars and the diminution in bore, coupled with increase in the length of the stroke. The popular size is undoubtedly 80 mm. bore by 120 mm. stroke, which comes for doctors within the £2 2*s.* tax. Such an engine, too, gives all the power likely to be required, and, of course, is economical in the matter of petrol.

A good many still cast their engines *en bloc*. Some makers, however, like the Darracq firm, have reverted to casting the cylinders in pairs. Except that this makes it easier to replace the engine covers, I do not think that it matters. If good oil is used for lubrication, and not too much, it will be of rare occurrence that pre-ignition will make a cleaning of the engine essential. Carbon deposits, too, are said to be removeable by the use of a chemical decarboniser, but opinions are divided as to its advisability. On another occasion I hope to be able to give the results of my own experience of this compound.

A large number of makers are using the Silent Knight slide-valve engine. The Daimler and Minerva companies started it, and now the Rover, Panhard, and Mercedes-Daimler are all building this type. Of course, when any engine is run hard, fast, and under load, it is not absolutely noiseless and without vibration, and probably the newer form may claim an advantage in these respects. Anyway, at present the poppet valves can be more easily repaired and adjusted than the slide valve, which seems an important point in favour of the former. Still, both are now so well made that breakdowns on either form are not likely to occur, and if they do—well, personally I should prefer the poppet engine. Some engines, like the Bentall, have overhead valves operated as on this type by an overhead cam-shaft, and other valves are operated by overhead rockers and by the usual crank case contained eccentric shaft. I do not quite see the advantage of the overhead valves, when they are lifted through rocking pieces that need long rods working in guides to reach the lifting cams in the crank case. However, as long as the moving parts are hardened it will be a long time before they wear enough to alter the lift of the valves, and if all the valves are on one side this method permits of larger valves being fitted, and the larger the valves the greater amount of charge, and thus an increase in power. To help to reduce noise the lift of the valves is reduced and the area increased, and that is why on some engines the inlets are on one side and the exhaust on the other, as with the White and Poppe and Austin engines. This, of course, means an extra cam-shaft. On many cars, too, to further deaden sound, the valve-lifting parts are covered in by easily detachable covers, as on the Napier and Austin.

The general tendency seems to be in favour of high tension magneto ignition, and this is now so satisfactory that many of the smaller cars rely solely on this method of exploding the mixture. Personally, however excellent it is, I prefer the knowledge that a second method is ready at hand, and the various forms of dual ignition shown by Messrs. Bosch, the Simms Co., and Messrs. Hall are all good, and medical men ordering cars could easily have one of them fitted in lieu of the single method or, what is as good, an already timed spare magneto can be carried. If this is decided on it is as well to see that the magneto is easily removable, and those held in position by a band are the best. On most cars it will be noticed that they are thus fixed.

Cooling is still on a good many cars assisted by a pump, but as this is now in all cases gear-driven trouble with this portion of the car's anatomy need not be anticipated. On many of the smaller cars thermo-syphon cooling is found sufficient. One good feature in the show is that on most cars the water-circulating pipes are of good size and on nearly all the radiator is helped by a circulating fan.

Lubrication is now in many cases maintained by some simple and out-of-sight form of pump which keeps a constant level of oil in the troughs under each big end. In some cases, as on the Daimler, the height of the oil in these troughs is varied with the speed of the engine, the throttle being connected, so that as it is opened they become deeper and, as closed, shallower.

Simplicity coupled with efficiency in carburetters seems the rule, and there are some excellent multiple jet arrangements. But still the single jet gives such good results that, generally speaking, the multiple jet form seems a needless complication. The spring controlled extra air valves also seem popular, which I believe accounts for the ability of the modern small engine to pull so well at low engine speeds.

Of clutches there are many, and the battle still rages between multiple disc and the leather cone. Personally, I prefer the latter, providing that some simple method to ensure slow engagement is fitted. Of course, accuracy of workmanship has more to do with the satisfactory working of a clutch than its form, and most cars by good makers have clutches that are excellent, whether they be multiple disc, leather cone, or expanding. The Metallurgique clutch is a good example of an internal expanding type, and on the Mors will be noticed an external form similar to the ordinary external band brake. The Austin fit a neat kind of leather cone, in which the leather is put on in segments, and on the Darracq too the cone is split radially at intervals round its edge, which also assists gradual engagement, and thus obviates fierceness.

Ball-bearings are universal for every part except the crank, and some makers, such as the Napier and Darracq, employ them also for the crank. The Hoffman, "F. and S.," and the Timken seem the favourite kind, and all are certainly of very superior make and likely to give satisfaction

Most gearboxes also are made with ball-bearings. On the F. and S. stand a crank is shown running by its own weight, and the way it spins when once set going is certainly a proof of the advantage of this method of reducing friction. Still, the multiplying of ball-bearings is simply a craze, for since a year I have driven a car with plain bearings without any trouble, and provided a plain bearing is well lubricated at the beginning worry in that quarter will not take place. However, the public are now keen on ball-bearings, and as makers are anxious to meet the wishes of possible clients the majority of cars are now so fitted—in fact, some cars perfectly bristle with ball-bearings.

The live-axle is now established, and the fight is not between chains and propeller shafts, but between bevel and worm final drive. The latter is becoming more common, and, provided it is well made, this form, which was first introduced by the Lanchester Company and Messrs. Dennis, has certainly the advantage of silence over its rival. It is, however, more expensive to turn out, and, of course, it increases the angularity of the propeller shaft. Practically every car has now one direct drive, and this year a large number of cars, and even small ones, are made with four forward speeds instead of the usual three, which is an undoubted improvement, especially on the lower-powered cars. At one time there was a tendency to make the direct drive the third speed, and to gear up the top one; but as all drivers naturally like, whenever possible, to be on the top, this method was not popular, as the top was not as silent as the third.

The majority of cars have still the foot-brake acting on the propeller shaft, and the hand-controlled one on drums on the back wheels. On some cars this is very wisely reversed, the foot-brake acting on the back wheels, as on the Stoewer car. On others both sets of brakes operate on the back wheels, as on the Straker Squire. On an increasing number of cars front wheel brakes are fitted—as, for instance, the Allen Liversidge, the working of which was described in THE LANCET last year, and is well shown on the stand of that firm in the gallery. Messrs. Crossley and the Argyll Company are amongst those who fit this kind of brake, which is undoubtedly superior as well as more safe on greasy, skiddy roads. They must, however, be employed with care to avoid interference with the steering.

The steering gear has of late years received more attention, and now undoubtedly is satisfactory—a very important matter, considering the danger that might result should this mechanism fail.

The springing of cars is certainly better than of yore, the general tendency being to make the springs flatter and to provide for their lubrication, with the result that there is now undoubtedly comfort without undue flexibility.

The tyres on most cars might still be more proportionate to the weight, and as an example of the advantage of heavier tyres it is to be noted that on the latest car built for the King tyres 965 mm. by 175 mm. are fitted. Of the tyres themselves, the Continental Tyre and Rubber Company, Limited (Stand 308), the Collier Tyre Company (Stand 296), the Dunlop Pneumatic Tyre Company (Stand 302), Messrs. George Spencer Moulton and Company (Stand 305), the North British Rubber Company (Stand 286), Messrs. Goodrich, Limited (Stand 300), the Michelin Tyre Company (Stand 307), the Palmer Tyre Company, Limited (Stand 181), and the Stepney Spare Motor Wheel Company (Stand 280), all show good examples of plain and non-skid productions. One improvement, however, I think we all would welcome is in the matter of price. As far as quality goes, there is marked alteration for the better. The combination of rubber with metal studs seems a good idea, but personally I believe the all-rubber non-skids, such as the Stepney or Kempshall, are the more efficacious and certainly last longer than the steel kind.

Among accessories the most striking novelties seem to be in the matter of electric lighting, which has great advantages for the motoring doctor. Messrs. Charles Jarrott and Letts, Messrs. Peto and Radford, Messrs. Fuller, and the C.A.V. Company all show interesting kinds of this form of illumination. In connexion with the dynamo lighting, it is possible for medical batteries, such as those used for X ray work, cautery, or electrolysis, to be recharged in the day-time while the car is in use, the dynamo current being taken direct to such batteries, thus charging them while the engine is running. Messrs. Longstreth's and Brown Brothers also show a good assortment of motor head, side, and tail lamps.

In the coachbuilding exhibits there is one satisfaction—the English builder competes well with foreign competitors. All types are shown, from the modest two-seater to the sumptuous landaulette, and the various creations of such firms as Barker, the Gordon Carriage Works, Holland, Hora, Lawton, Maythorn, Mulliner, Morgan, Salmons, W. and F. Thorn, and Thrupp and Maberly show well the present-day improvements in contour and comfort. Those who rode 12 years ago in the old Benz cars, with their dog-cart bodies and solid tyres, will appreciate the change. As examples, one has but to look at such little two-seaters as the Swift, Darracq, or De Dion, or the Medicann closed-in two-seater, as well as the torpedo, limousine, and landaulettes which abound in the Long Acre part of the show. High fronts, side doors, and adjustable wind-screens seem the rule, and all add greatly to the comfort of driving in the variations of weather that we have to put up with in this country. The only grumble that I can make is that when the Cape-cart hood is up some wind-screens make getting in and out of the car rather a difficult performance.

In continuation of my short notes last week about particular exhibits, there are a few more which deserve mention. The Tribet Car is shown by the Motor Mercantile Co., Limited, of Duke-street, W., on Stand 4, and is well fitted for a two-seated cabriolet body. The four cylinders are cast in pairs, and have a bore of 70 mm. and a stroke of 100 mm. The valves are on each side, and are interchangeable. The carburetter is a Claudel-Hobson, and ignition is by Bosch magneto. The radiator is of the grilled pattern, and the circulation is assisted by means of an efficient pump. The gearbox provides for three forward speeds and a reverse operated by a single lever, and the transmission is by cardan shaft and the usual bevel gears. The brakes are of the internal expanding type, and the car is in every way of sound up-to-date construction.

Messrs. Armstrong, Whitworth, and Co., of Blenheim-street, New Bond-street, W., on Stand 60, show two useful sized models, of 15·9 h.p. and 17·9 h.p. The latter has an engine 85 mm. by 120 mm., a multiple disc clutch, dual ignition, tyres 815 mm. by 105 mm., and detachable wire wheels. The pressure-feed to the petrol tank is operated by a mechanical pump, and all the valve mechanism is enclosed. These cars are sold with a comprehensive insurance policy that covers not only third-party claims and accidents, but mechanical breakdowns also.

Not only is there a fine array of cars on Stands 129 and 71, where Messrs. Crossley Bros., of Manchester, are exhibiting, but their cars are especially interesting in view of a very ingenious method of front-wheel braking which should certainly be inspected.

The Gladiator Company, of Great Portland-street, W., now only build two models—a 12–14 h.p. and a 35–40 h.p. The smaller has genuine good workmanship and is fitted for either a two-seater or a small four-seated body.

Messrs. Humber of Coventry have always been popular with the profession, and their 1911 four models are bound to maintain the reputation of their predecessors. Among many features are chain-driven cam-shafts and the use of the propeller shaft casing as a torque rod. Detachable wire wheels are fitted, and though their prices are somewhat advanced, I do not think that this will in any way affect their popularity.

The cars that are "made like a gun," by the Enfield Company, of Sparkbrook, Birmingham, are just to the right of the Hammersmith-road entrance on Stand 90. The 12 h.p. has a four-cylinder engine, 75 mm. by 100 mm., with enclosed valves and tappets on the near side, cooling being by thermo syphon, and ignition by gear-driven magneto. The clutch is a leather-faced cone. There are four forward speeds, controlled by the usual gate. On the 20 h.p. either the third or fourth speed can be supplied as direct.

On Stand 56 Messrs. Rolls-Royce, Limited, of Conduit-street, W., merely show the chassis of their only production, a six-cylinder, the price of which is, roughly, £1000, and yet, in spite of this figure, I understand that a very large number of orders have been booked by this firm. The engine should certainly be seen, as it represents all that is latest and best in the matter of a six-cylinder.

The Sizaire-Naudin Car, made by Messrs. Jarrott and Letts, of Great Marlborough-street, W., is on Stand 71, and is chiefly famous because the change-speed mechanism is incorporated in the back axle-casing, and by the engaging of different small bevels with the crown wheel all the speeds are

direct. This car, which was described in THE LANCET of March 27th, 1909, can now be had with either a single- or a four-cylinder engine.

Messrs. Clement-Talbot, of North Kensington, are on Stand 51, where they show specimens of their four models, as well as an enormous number of medals—a proof of the many successes they have obtained in competitions with their cars. This firm have been the earliest advocates of the now popular four-speed gearboxes, and the automobiles shown are in every way worthy of their name.

REPORT OF THE COMMISSIONERS OF PRISONS AND THE DIRECTORS OF CONVICT PRISONS FOR THE YEAR ENDED MARCH 31ST, 1910.

THE Prison Blue-book for the year 1909–10, in accordance with the practice adopted some years ago, has been issued in two parts, the first containing the reports of the Commissioners and of the several inspectors, together with the usual statistical tables referring to the general prison population, while the second part gives detailed information regarding the different local and convict prisons, Borstal institutions, and State inebriate reformatories.

The total number of prisoners received into local prisons during the year was 216,148—173,800 males and 42,348 females, these figures showing a slight decrease on the numbers for 1908–09. There were 82 deaths from natural causes during the year, giving a death-rate of 0·38 per 1000 prisoners received, the average rate for the last five years being 0·42. Nine deaths were due to pulmonary tuberculosis, and it is remarked that the disease existed prior to reception in all the cases save one. Five prisoners committed suicide. Sixteen cases of infectious disease were reported during the year, the infection having in most instances been contracted prior to the prisoner's admission.

The number of prisoners certified insane in local prisons last year was 118—viz., 106 males and 12 females. The medical inspector remarks that, though there has been a slight tendency to a decrease in the number of these cases, the fact is not an indication of any increase of discrimination on the part of the committing magistrates, for the ratio of prisoners found to be insane on reception to the total number certified has remained fairly stationary. It would appear, therefore, that there is still room for improvement in regard to the investigation of the mental condition of accused persons, and that if more care were exercised by magistrates it would be possible to avoid, or at all events to abate, the scandal of sending lunatics to prison. As evidence of what might be done by a more liberal use even of the existing machinery, the medical inspector points to the excellent results of the growing practice in the larger centres of remanding prisoners of doubtful mental condition for the expert examination of the prison medical officer. This is done very freely in the metropolis, where the medical officers of the two prisons, Brixton and Holloway, which receive prisoners on remand, were called on last year, for instance, to report to courts of summary jurisdiction on the mental state of nearly 900 accused persons, a considerable proportion of whom were found to be certifiably insane. Moreover, of course, all prisoners committed to these prisons for trial at assizes and quarter sessions are specially examined with regard to their mental condition, and evidence on the point is furnished to the courts. The good effect of this sifting process is seen in the fact that in the metropolitan prisons the proportion of cases in which insanity is not recognised till after the sentence is much below the average for the country at large. Thus during the last five years the three London prisons for convicted males—Pentonville, Wandsworth, and Wormwood Scrubbs—which receive over 28 per cent. of male convicted prisoners in England and Wales, have only contributed 16·1 per cent. to the total number of prisoners certified insane after conviction. And similarly Holloway, though receiving more than 30 per cent. of the women sent to prison in this country, has in the same period furnished less than 13 per cent. of the cases of insanity in convicted females. That this is mainly due to the cause indicated above, and not to any lack of insane offenders in London, is shown to be very probable by the fact that Holloway accounts for upwards of 60 per cent. of the cases of women on remand who were reported as insane to courts of summary jurisdiction.

During the year 322 convicted prisoners were specially dealt with under the modified rules for prisoners so feeble in mind as to be unfit for ordinary penal discipline. In this connexion it is satisfactory to note that the Commissioners announce that in compliance with the desire of the Secretary of State they have submitted definite proposals for dealing with the problem of the feeble-minded offender. It is suggested that legislative sanction should be obtained to empower the Secretary of State "to transfer prisoners to special institutions, under due safeguards, on medical certificate (analogous to that given in cases of insanity) that a person under sentence is so clearly defective in mind as to be unable to earn his own living or to take ordinary care of himself, and to be likely to revert to crime on discharge unless special means are taken for his supervision." If this suggestion is carried out, and if the class of mentally defective delinquents can be dealt with at once and independently of the general problem of the feeble-minded, it is considered that an institution for about 500 would be required at the start. It may be hoped that this announcement indicates that the Government are prepared at length to take action on this matter, the urgency of which has been so constantly pressed on their attention by the Commissioners for several years past. Some idea of the difficulty of dealing with the heterogeneous material which under the existing system has to be managed in prisons can be gained from the very remarkable report of the medical officer of Pentonville Prison, Mr. J. H. Parker Wilson, published in the second part of the Blue-book, in which he gives an account of the feeble-minded, the epileptics, the vagrants, and the inebriates admitted to that institution in the course of a single year.

The daily average population in the convict prisons last year was 3069 males and 120 females. The deaths during the year numbered 22, all but one being due to natural causes, giving a death-rate from such causes of 6·5 per 1000 of the daily average population. Thirty-six convicts were certified insane.

The medical officers of the Borstal institutions are emphatic in calling attention to the excellent results in improved physique and nervous tone which have been obtained by the physical exercises and the general discipline enforced on adolescent prisoners under the Borstal system. It is gratifying to learn that the Commissioners see some prospect of being able to modify the limitation which has hitherto excluded lads in bad health or of poor physique from the operation of this system. The opening of a new Borstal institution at Feltham may, it is hoped, provide enough additional accommodation to allow of the formation of a special class for those adolescents whose physique renders them unfit for the full measure of drill and gymnastic exercises. The efforts being made to develop the Borstal methods and to further other reforms tending to substitute the educative and preventive for the purely deterrent influences in the penal system afford gratifying evidence of the spirit which animates the prison administration under the *régime* of Sir Evelyn Ruggles-Brise. Amongst the appendices to the report special reference may be made to a very interesting inquiry by the secretary of the Prison Commission, Mr. Basil H. Thomson, regarding the question of recidivism. Taking advantage of the improved means of identification provided by the finger-print system, Mr. Thomson has investigated the after-history of 4563 convicts discharged in the five years 1900 to 1904 and has found that 30 per cent. have not relapsed into crime, and that of the apparently confirmed recidivists as many as 17 per cent. have kept out of trouble. Considering the quality of the material this is a very encouraging result, and goes to prove that the more humane methods now in vogue are exercising some real reformatory influence.

ROYAL SOCIETY OF MEDICINE (BALNEOLOGICAL AND CLIMATOLOGICAL SECTION).—A general meeting of this section was held at 15, Cavendish-square, W., on Oct. 28th, Dr. T. F. Gardner (Bournemouth), the President, being in the chair. The President gave an address entitled "Air and Water: Is there anything New under the Sun?" The same evening the annual dinner took place at the Imperial Restaurant, at which Sir Thomas Barlow and Dr. Bertrand Dawson were guests.

COLONY OF HONG-KONG: PUBLIC HEALTH REPORT FOR 1909.

IN the recently published volume of medical and sanitary reports for Hong-Kong there is a joint report on the public health of the colony for 1909 by the principal civil medical officer and the medical officer of health.

Personnel: Reduction of Inspectorate.

In noticing a previous issue of these reports we gave particulars of the area administered by the Sanitary Board of the colony. The mixed character of the population was also indicated, the European being distinguished from the native and the civil from the military and naval inhabitants of the district.[1] The *personnel* of the Hong-Kong sanitary department has changed considerably since 1908. Dr. J. M. Atkinson still contributes the civil portion to the report, but the sanitary and statistical portion is now authenticated by Dr. Francis Clark, in place of Dr. W. W. Pearse, who has been transferred to Kowloon as assistant medical officer of health. The sanitary inspectors of Kowloon work under Dr. Pearse's personal supervision, but the sanitary inspection of the remainder of the colony seems to be delegated to the local police. Since the year 1908 a general improvement in the public health of the colony has been observed, and this fact has unfortunately been held to justify a large reduction of the inspectorate, for the five special plague officers hitherto employed have been dismissed, their important preventive duties being apparently left to the ordinary district inspectors. From what can be gathered from recent reports concerning the imperfect sanitary defences of Hong-Kong against the ravages of plague, this serious reduction of the expert staff seems to be a retrograde step. We shall therefore be interested to learn how far it has been sanctioned by the medical authorities locally responsible for the maintenance of the public health.

Vital Statistics.

According to the best estimates available, the total population of the colony in 1909 numbered about 344,000, of whom rather more than 323,000 were either Chinese or Malays, and of these 46,000 were included in the "boat population." The civil population consists mainly of male adults. At the 1901 census 72·6 per cent. of the inhabitants were males. At the last census (1906) the proportion fell to 70·1 per cent., so that there has been during that interval an increase in the proportion of females, which means an improvement in family life among the Chinese. More than half of the civil inhabitants are between the ages of 20 and 45 years.

For reasons given in the previous report, the medical officers repeat their warning that the registered number of Chinese births affords no trustworthy measure of the true birth-rate. Owing to the custom of registering the births of only those children who survive the age of one month, the reporters indicate the proportion of 7·0 per 1000 of the Chinese population as the maximum rate of natality that can justly be recorded for the year 1909. Very remarkable is the preponderance of male over female births registered among the Chinese. In the year under notice not fewer than 266 males were born to every 100 females. Among the non-Chinese community the male births were in the ratio of 117 to 100 female births, a proportion which approaches more nearly than the foregoing to that of this country. The mortality in Hong-Kong varies considerably from time to time. Last year the rate was equal to 21·1 per 1000 living, against a rate of 27·6 per 1000 in the year immediately preceding. Of the total deaths at all ages about one-third were those of infants under one year old. Among the Chinese population the *known deaths* of infants numbered 2260, whilst only 1202 births were registered: if to these be added the unregistered births of children under one year of age that died in convents or that were found dead in the streets the total deaths will amount to 2588, a number corresponding to an infantile mortality which must be considered enormous.

In this report the deaths from pulmonary tuberculosis are included with those from other diseases of the respiratory system, and these together account for more than one-third of the mortality from all causes. Among the Chinese the deaths from respiratory diseases in the year 1909 corresponded to a rate of 7·8 per 1000 living, and those from pulmonary tuberculosis to a rate of 2·3 per 1000. In that year these latter deaths were in the proportion of 10·7 per cent. of the total deaths, as compared with 9·8 per cent. in 1906—a fact which is regarded by the reporters as indicating that the deaths from this disease are proportionally on the increase, although the total mortality is less.

Malaria, Plague, &c.

The loss of life from malarial fever has been decreasing slightly since the year 1907. Last year 422 deaths were referred to it, all but five of which were among the Chinese. In this colony definite preventive measures against malaria were first undertaken in 1899, since which year considerable attention has been directed to the work. The inspectors have diligently sought for and removed the breeding-places of mosquitoes, dense tangles of brushwood have been cut down, the "trained nullahs" have been regularly swept to prevent the growth of waterweed and of algæ, and stagnant water has in many places been periodically treated with kerosene; and further, the ordinary methods of house fumigation with sulphur have been carried out in suitable cases. Hygiene is taught systematically in all the schools of the colony, special attention being paid to the mode of malaria infection by the mosquito, as well as to the manner in which the mosquito breeds. The total number of cases of plague reported last year was 135, as compared with 1073 in the preceding year, and 893 and 240 respectively in the years 1906 and 1907. Thirty-one of the cases occurred in Kowloon city, a native city of old rat-ridden dwellings, which only came under British jurisdiction in 1899 and has not yet been rebuilt. Of the 135 reported cases 108 died, the mortality among the non-Chinese being 57 per cent. and among the Chinese 81 per cent. It is well known that rats are chiefly instrumental in distributing the infection of plague, and in Kong-Hong a special rat-poisoning campaign is instituted annually just before the onset of the usual epidemic season—i.e., during January, February, and March. In the course of last year 60,000 rats were killed in the city of Victoria and 16,000 in Kowloon; of this number not fewer than 407 were found, on bacteriological examination, to be infected with plague. Among other infectious diseases enteric fever is reported to have been somewhat more prevalent than usual last year, whilst with this exception the colony appears to have been comparatively free from ordinary diseases of the epidemic class.

[1] THE LANCET, March 19th, 1910, p. 817.

SANITATION IN INDIA.

IN continuance of our custom we present our readers with a brief review of public health matters in the Indian Empire, described from the official annual reports, with which we have been favoured by the courtesy of the authorities concerned. Although we are nearing the close of 1910 we have not yet received the whole of the 1909 series of reports; indeed, from Madras the only one that has come to hand is the report on lunatic asylums. The reports from the senior Presidency seem to be generally somewhat tardy in arrival. Neither have we the vital statistics from the other Presidency administrations of Bengal or Bombay. The collection and preparation of statistics from these enormous populations and from such wide areas is, however, we are well aware, a very long business; the mass of figures is appalling. Great care has been exercised in the printing of these reports, which shows marked advance on the typographical work of some years back. We shall deal first with the general sanitary administration, then with the civil hospitals and dispensaries, then with the jails and asylums.

I.—SANITARY ADMINISTRATION.

United Provinces of Agra and Oudh.

The Report of the Sanitary Commissioner for the United Provinces of Agra and Oudh for 1909 is the forty-second annual issue. The vital statistics are, as usual, calculated on the population according to the census of 1901. No other method is feasible, but obviously, in the eighth year after enumeration, the figures for 1901 do not afford an accurate basis for the calculation of ratios. Both birth-rate (33·32

per 1000) and death-rate (37·34) were below the quinquennial means (41·35 and 42·79 respectively); the former is accounted for by the extreme unhealthiness of these provinces, due to malaria, in the preceding year (1908), the latter to the weeding out of the weakly and aged in 1908 from the same cause. It is noted that the (monthly) birth-rate rose steadily from 1·59 in July to 4·05 in December; and that this rise was most marked in the districts where malaria had been most severe, and the previous diminution most noticeable; so rapid a recovery is a striking instance of the tendency of nature towards equilibrium—*tamen usque recurret*. The death-rate (37·3) was much lower than the very high figure (52·7) in 1908; but was nevertheless considerably higher than in any other province in India. The infantile mortality (241·6 per 1000), though less than the high ratio (345) in 1908, is still excessive; from an inquiry conducted by a lady doctor specially appointed for the purpose, it appears that 30 per cent. of these infantile deaths result from tetanus. In regard to all causes of death except plague, these provinces suffered less than in 1908. Plague, however, increased in severity, and caused 38,394 deaths, the mortality increasing towards the end of the year. The malarial mortality was high in certain districts that had been severely affected in 1908, and decreased in the latter part of the year. Arrangements have been made to secure early notification of malarial prevalence, and an effective free distribution of quinine should an epidemic occur. At Chakrata 62 cases of a fever intractable to quinine were reported, which on bacterial investigation at the Kasauli laboratory were found to be relapsing fever; there were ten deaths, but measures were promptly taken and the spread of the disease checked. At Naini Tal there was a recrudescence of enteric fever, 45 cases amongst natives and 23 amongst Europeans being diagnosed; nine of the European cases were residents at St. Joseph's School; on investigation by Captain E. D. W. Greig, I.M.S., a carrier was detected employed in the cookhouse of this institution; the man was discharged and no cases occurred subsequently. No allusion is made to the military depôt for typhoid convalescents at this station; its presence has not presumably had anything to do with the outbreak just mentioned. At Benares biological methods of sewage treatment are carried out; ordinary contact beds and two secondary beds are in use, and are stated to be working well. Two great fairs took place during the year, one at Allahabad in February, the other at Hardwar in April; only one case of cholera occurred on the former occasion; at Hardwar (where some 300,000 people were gathered together) there were 156 deaths from this cause. In former days the deaths would have run into thousands and the epidemic spread over half a province; only those who know the conditions can appreciate the unceasing vigilance and administrative skill that must have been displayed in dealing with these emergencies. Major J. C. Robertson, I.M.S., officiating Sanitary Commissioner, has paid particular attention to the causes underlying the prevalence of malaria in the Naini Tal Tarai, and has completed malarial surveys of the two excessively feverish towns, Saharanpur and Nagina. This officer furnishes the present report, but the Sanitary Commissioner during the year was Colonel C. C. Manifold, I.M.S.

A special report is forwarded by Colonel Manifold, now Inspector-General of Civil Hospitals, on the prevalence of plague in the United Provinces during the twelve months, July, 1909, to June, 1910. The services of the medical officers who had been appointed in 1907 to superintend plague inoculation, conservancy measures, and the destruction of rats were dispensed with (except at Cawnpore) in April, 1909. In July Government directed that all expenditure on special measures against plague should be discontinued until it broke out again in epidemic form, and that before any measures involving expenditure were undertaken the sanction of Government should be obtained. These orders were strictly observed. During the year (July, 1908, to June, 1909) there had been 15,580 seizures and 13,814 deaths. From July, 1909, to June, 1910, there were 151,293 seizures and 141,357 deaths. Comment is unnecessary.

The main feature of this epidemic was the much higher mortality in 1909 than in 1908 during the months July to November: the deaths numbered only 331 in 1908; they were 10,550 in 1909. In December, January, and February the mortality continued to increase, until in March, 1910, the total plague deaths reached 39,513; thereafter the disease rapidly abated, until in June there were only 280 deaths. More than half the deaths (74,989) occurred in the four most easterly districts, Ballia, Ghazipur, Azamgarh, and Gorakhpur. Inoculation proved to be a very unpopular measure; the belief that it causes impotence is widespread, and the fear of this calamity is greater than that of dying from plague. Where inoculation succeeded it was owing to the tact of the medical staff and in some cases to the good example of some man of influence; if such a person was himself inoculated, with the whole of his family and his zenana, the entire village would very likely follow his example.

Central Provinces and Berar.

In the Central Provinces and Berar the duties of Sanitary Commissioner were combined with those of Inspector-General of Civil Hospitals under Colonel P. A. Weir, I.M.S., until Feb. 1st, 1910. On that date the departments were separated, and Captain T. Stokes, I.M.S., was appointed Sanitary Commissioner. The report for the previous year is his work. The birth-rate, 51·63 per 1000, was higher than in any other province; but, as already remarked, these rates are subject to much correction, as the census figures have become obsolete. The general death-rate for 1909 was 33·09 per 1000, the third highest in India, but lower than in any of the preceding six years in these provinces. Neither cholera nor small-pox prevailed to any considerable extent, though the former disease was introduced by pilgrims returning from Benares and Nasik into several districts. Malarial fevers accounted for 15·08 per 1000, nearly half of the total mortality; the number of deaths amounted to 180,544, but this was a considerable improvement on the previous year. No special antimalarial measures were carried out. Plague prevailed in Nagpur town and district, and to a slighter extent in several other places. The Sanitary Commissioner considers that rat destruction is practically a hopeless task and mere waste of money.

Punjab.—North-West Frontier Province.

The report on sanitary administration in the Punjab for 1909 is of a much more satisfactory character than that for the previous year. The climatic conditions were generally favourable to the public health, there was comparatively little malaria, food was cheap, and the general prosperity increased. The death-rate, 30·89 per 1000 (as compared with 50·73 for 1908), was the lowest since 1900. Cholera and small-pox were not extensively prevalent. There was a slight increase in plague; the value of inoculation is not recognised by the population at large, and in regard to rat destruction they are apathetic. It is stated, however, that the country people are showing a gradual tendency to evacuate infected villages of their own accord. The severe malarial outbreak of the previous year did not come to an end until the spring of 1909, but the rest of this year was singularly free from the disease; quinine distribution is carried out on a large scale. It is noted with satisfaction that the municipal committee of Lahore is active in taking measures to improve the sanitary condition of the city, and that the general public are more alive to the importance of sanitation than they used to be.

The North-West Frontier Province had a satisfactory sanitary record in 1909: the death-rate, 26·6 per 1000, was the lowest returned since the formation of the province, and lower than any other in India for the year, except Madras. It is noted that vaccination is now fairly well accepted by the people; the small-pox mortality has fallen to 0·32 per 1000.

Burma.

In Burma there was an increase in mortality in 1909 over the two previous years, the death-rate from all causes being 30·18 per 1000; this increase was confined to Upper Burma, where the rate was 34·81, Lower Burma having a rate of only 27·70; the cause for the increase was prevalence of cholera, fevers, and plague in the Upper Province. Major C. E. Williams, I.M.S., Sanitary Commissioner, gives considerable attention to the very high mortality of infants under one year, 222 per 1000; but the conclusion arrived at is that the registrations of birth are incorrect. Though Lower Burma suffered less from cholera than in the previous year, in Upper Burma there was a heavy mortality in nearly all areas; the fact is, the water-supplies are everywhere open to pollution. Mandalay experienced a sharp outbreak with 795 deaths.

The river water is preferred to the well water for drinking by a large proportion of the townspeople, and the water-carriers fill their barrels at that point where native shipping congregates. "It appeared on inquiry," says the Sanitary Commissioner, "that legal powers do not exist to prevent the water-carriers from taking water for sale from any point of the river bank which they find most convenient." It seems to us that whether they had legal powers or not, the municipal or police authorities might have prevented this obviously dangerous practice and saved a large proportion of the 795 lives lost; the legality could have been argued out afterwards. Mandalay also suffered severely from plague, there having been 2366 deaths. In regard to the province generally it is stated that no marked advance was effected in protecting the town and country populations from plague, local sanitary action and rat destruction only being adopted after the presence of plague in a locality was recognised. The only measure of real value after the appearance of the disease is considered to be evacuation, which was carried out with good effect in several districts. In Rangoon more than a lakh of rupees was paid to the public for rat destruction during the year. It is pointed out that for less than half this sum a properly organised municipal establishment for the purpose could have been maintained, fraud having been practised by the public, by bringing in rats from outside in order to claim the reward. Experiments conducted by Captain R. D. Saigol, I.M.S., at Maymyo resulted in the preparation of a virus for rat destruction which retained its efficacy for apparently an indefinite period, and which was intended to be extensively used during the ensuing quiescent season.

Eastern Bengal and Assam.

From the report on the province of Eastern Bengal and Assam, by Major E. Wilkinson, I.M.S., Officiating Sanitary Commissioner, we learn that the most noticeable feature in the vital statistics for 1909 was an increase in the mortality from small-pox, which rose to 0·79 per 1000, being most prevalent in the rural areas, where it was more than three times the decennial average. In the Rangpur district, in some villages whole families were swept away, these places being those where the inhabitants persistently declined vaccination. The total death-rate was 33·89, fevers contributing 24·56 per 1000; this coincided generally with an excessive rainfall. Following on some recommendations by Dr. C. A. Bentley, changes both in the form of quinine issued and its method of distribution are now being adopted. Instead of the doses of quinine that have hitherto been sold or distributed gratis it is proposed to issue "treatments," each containing 20 four-grain tablets of the hydrochloride, packed in a glass phial with directions for use, and instructions as to personal prophylaxis. This is the method that has been carried out so successfully by the Italian Government. Anti-malarial operations were undertaken vigorously at Dinajpur and elsewhere; the results were not so successful as had been hoped for, but were encouraging; at Dinajpur fevers accounted for 59·47 per cent. of the total mortality, against 81·29 for the preceding five year-period, but Captain D. P. Goil, I.M.S., confesses to have been disappointed to find breeding places which had been cleaned and thoroughly kerosined still swarming with mosquito larvæ.

A valuable supplement is issued with this report, containing the results of special investigations into outbreaks of plague, cholera, beri-beri, and epidemic dropsy; also reports on water-supplies and drainage schemes. The papers are after the manner of those in the appendix to the report of the medical officer to the Local Government Board. The accounts of two outbreaks of pneumonic plague, in which Captain C. A. Gourlay, I.M.S., carefully traces the course of the infection, are most interesting; in Eastern Bengal no trace of rat infection was found, neither has bubonic plague ever spread epidemically, but the pneumonic outbreaks have been most virulent. Captain Gourlay also describes an outbreak of cholera, and states that he has been informed on good authority that fakirs have a system of blackmail: they demand money to prevent a village getting cholera, and if not satisfied deliberately infect the wells. An outbreak of epidemic dropsy at the Dacca lunatic asylum in 1908 is described both by Captain M. F. Reaney, I.M.S., and Lieutenant-Colonel R. N. Campbell, I.M.S. There were 158 cases, occurring within 15 days, in a population of 270. Colonel Campbell attributed it to some rust or fungus growth on the rice consumed, this poison having a special effect on the sympathetic system; Captain Reaney considered it might be of the nature of a food poisoning, though no particular article could be blamed. Captain T. H. Delaney, I.M.S., investigated the prevalence of beri-beri in the jails of the province, and came to the conclusion that none of the epidemic outbreaks of dropsy during recent years have been true beri-beri, there having been no true paralysis or anæsthesia; but that the disease in question was infectious dropsy spread by means of bed bugs. Two valuable papers are contributed by Dr. Bentley and Major Wilkinson on Practical Points of Quinine Prophylaxis. The records of investigations contained in this Blue-book (price 11 annas, or 1s.) should be in the hands of all medical officers engaged in sanitary work throughout India. It is to be hoped that the volume is as widely known and accessible as it deserves to be.

(To be continued.)

Public Health.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Circumstances and Administration of Bakewell Rural District,[1] by Dr. REGINALD FARRAR.—This report relates to a large area in the north of Derbyshire, which comprises many villages and hamlets well known to visitors to "The Peak." Particular attention is directed to the condition of local water-supplies, some of which are by no means satisfactory. Thus at Elton the supply consists only of a public dip-well, inconvenient of access, failing in dry weather, and fed by a spring which is liable to pollution. Pure water-supplies are needed at Monyash to replace the existing roadside reservoir and public wells; at Flagg, where water is drawn by bucket and windlass from the bottom of an old lead shaft, and is hard and subject to contamination; and at Earl Sterndale, where the villages depend chiefly upon rain-water collected from the roofs and at other places. The main village of Eyam derives its water from seven public troughs, fed by streams which in most cases are liable to surface pollution, while the water issuing from the troughs is often reduced to a mere trickle, so that the process of obtaining half a gallon of water occupies several minutes. There is, however, an abundance of excellent water in springs on the hillside above Eyam which should be made available for a public supply and piped to the houses. In several of the parishes in the district public supplies of a satisfactory kind have been provided. Where water is derived from moorland sources and is liable to act on lead, special care has to be taken to apply an appropriate treatment, such as the addition of lime, before it enters the service pipes. Neglect of this precaution in the case of the Stoke Flat water has on more than one occasion resulted in the occurrence of lead poisoning among the consumers. Bakewell rural district is included in the Haddon joint hospital district, established by the Derbyshire county council in 1897 under the Isolation Hospitals Act, 1893. The joint hospital board, which includes representatives of nine sanitary districts, has during the past 13 years considered and rejected ten sites for the construction of its hospital. The temporary arrangements made during this period of deliberation have been quite inadequate. Six beds rented at the Whitworth Hospital at Darley Dale appear to be the only provision available for the reception of infectious cases in this part of Derbyshire.

On the Sanitary Circumstances and Administration of the Borough of Bridgnorth,[2] by Dr. F. ST. GEORGE MIVART.—Stress is laid in this report on the dangers of a filtered water-supply derived from the Severn. The intake is only about 50 yards below the point where the Cantern brook, recipient of the effluent from the borough sewage works and the washings of the town refuse tip, flows out, while the river above the intake receives polluting matter at other points. The filtration formerly took place in sand filters; recently it has been effected by the experimental use of pressure filters, estimated to be capable of filtering 250,000 gallons in ten hours. This Severn supply is intended to be used for purposes other than drinking, and a duplicate supply of spring

[1] Reports to the Local Government Board on Public Health and Medical Subjects. New Series, No. 37. London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 4d.
[2] Ibid, No. 25. Price 3d.

water of good quality is also laid on to the town. The Severn water, however, has undoubtedly hitherto been used for drinking, and in Dr. Mivart's view is likely to be so used even more in the future. The population of the borough of Bridgnorth has not shown any increase in recent years, a circumstance to which the unsatisfactory character of some of the older house property and the general shortage of houses probably contribute. Dr. Mivart found that the need for cottages for the labouring population, particularly for such as have families, was very great. The shortage was not confined to dwellings for the poorer class. Rents are high—in some cases remarkably so, considering the accommodation afforded. An unsuccessful attempt was made by the town council some years ago to proceed with a scheme for erecting working class dwellings; it would seem in the interest of the town to make effective progress in this matter.

On the Sanitary Circumstances and Administration of the Clutton Rural District,[3] by Dr. R. J. REECE.—As in many other rural areas on which reports have been made by inspectors of the Local Government Board, the district of Clutton suffers from insufficiency of housing accommodation. Although a considerable amount of building is now being carried on in the larger villages, nevertheless, in these as well as in the more rural parts, people were found occupying houses so insanitary and so dilapidated as to constitute "uninhabitable" houses. Most of them live in these conditions because they cannot find more suitable houses to move to; and they are permitted so to live lest by their ejectment overcrowding in other houses should be brought about. The demand for more dwellings is increased by coal-mining operations in the district, which will probably be extended and so increase the demand. By the terms of the Housing and Town Planning Act the district council can provide house accommodation for miners working at the coal-pits, and Dr. Reece indicates that this course should be followed if the necessary housing is not forthcoming through private enterprise. The greater part of the district is now served by public water-supplies, but the water available is in certain instances liable to possible pollution. In an important supply termed the "eight parishes," furnished by pumping from a well at Gurney Slade, the danger lies in polluting matters being drawn to the well from villages which appear to lie on the gathering area, and from the existence in this part of the country of numerous "swallow-holes" and fissures in the strata which may be the receptacles of sewage from houses and groups of dwellings.

On the Sanitary Circumstances and Administration of the Holywell Registration District,[4] by Dr. E. P. MANBY.—As a result of an extensive and detailed inquiry in this registration district, which comprises the larger part of the county of Flint, Dr. Manby makes a strong recommendation in favour of the appointment of a whole-time medical officer of health. "At present, in the Holywell Registration District six district councils profess to combat insanitation and infectious disease with the aid of four medical officers of health and seven inspectors of nuisances. Each medical officer is entirely independent of the others, and each inspector is practically independent, not only of the other inspectors and medical officers, but of the medical officer of his own district. In result, uniformity and continuity of action in health matters are wanting." Examples are given of the numerous shortcomings of the several districts referred to, and there can be little doubt that the present arrangements have been wasteful and inefficient. A scheme for combination is given, and the arguments habitually used against such appointments are set out and dealt with in a way which should facilitate agreement between the districts concerned, if they are disposed to come together in the absence of action by the Local Government Board which would oblige them to make the arrangements recommended.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 7851 births and 4250 deaths were registered during the week ending Nov. 5th. The annual rate of mortality in these towns, which had been equal to 13·0 per 1000 in each of the two preceding weeks, rose to 13·1 in the week under notice. During the first five weeks of the current quarter the death-rate in these towns averaged 13·0 per 1000. In London the death-rate during the same period, calculated on the probably over-estimated population, did not exceed 12·7 per 1000. The lowest reported annual death-rates last week in these 77 towns were 5·7 in West Hartlepool, 6·3 in Willesden, 6·4 in Warrington, and 6·7 in East Ham; the rates in the other towns ranged upwards to 18·8 in Wigan, 19·4 in Tynemouth, 19·5 in Swansea, and 20·5 in West Bromwich. In London the reported death-rate last week did not exceed 13·1 per 1000. The 4250 deaths from all causes registered in the 77 towns last week showed a further slight increase of 28 upon the numbers in the two preceding weeks, and included 361 which were referred to the principal epidemic diseases, against 504 and 425 in the two previous weeks; of these 361 deaths, 123 resulted from diarrhœa, 101 from measles, 46 from diphtheria, 32 from whooping-cough, 30 from scarlet fever, and 29 from enteric fever, but not one from small-pox. The mean annual rate of mortality from these epidemic diseases in the 77 towns last week was equal to 1·1 per 1000, against 1·6 and 1·3 in the two previous weeks. No death from any of these diseases was registered last week in Walthamstow, South Shields, Stockport, Hornsey, Huddersfield, or in eight other smaller towns; the annual death-rates therefrom ranged upwards, however, to 2·5 in Barrow-in-Furness, 2·9 in Stockton-on-Tees, 3·2 in St. Helens, and 3·6 in Brighton. The deaths attributed to diarrhœa in the 77 towns, which had declined in the nine preceding weeks from 527 to 184, further fell last week to 123, and were lower than in any week since the middle of August; the highest annual rates from this cause in the 77 towns last week were 1·4 in Oldham, 1·6 in Brighton, and 2·4 in York. The fatal cases of measles, which had been 75 and 107 in the two previous weeks, declined again last week to 101; they caused the highest annual rates, 1·6 in Brighton and in St. Helens, and 1·8 in Tynemouth. The 46 deaths referred to diphtheria showed a further increase of 4 upon the numbers in recent weeks, and included 9 in London and its suburban districts, 3 in Stoke-on-Trent, 4 in Liverpool, 3 in Leeds, and 2 each in Birmingham, Derby, Birkenhead, Manchester, Burnley, Sheffield, and Hull. The 32 fatal cases of whooping-cough showed a further decline from recent weekly numbers, but caused an annual rate equal to 1·9 in Stockton-on-Tees. The deaths from scarlet fever, which had been 26 and 27 in the two preceding weeks, further rose last week to 30, of which 6 occurred in Liverpool and 3 each in Birmingham, Manchester, and Leeds. The 29 deaths referred to enteric fever were within one of the number in the previous week, and included 3 in Manchester and in Bradford, and 2 each in Portsmouth, Stoke-on-Trent, and Rhondda. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospital, which had steadily increased in the 11 preceding weeks from 1423 to 1847, had further risen to 1856 on Saturday last; 188 new cases of this disease were admitted to these hospitals during last week, against 234, 231, and 221 in the three preceding weeks. The 1226 deaths from all causes in London last week included 246 which were referred to pneumonia and other diseases of the respiratory system, against 162, 194, and 234 in the three preceding weeks, but were 17 below the corrected average number in the corresponding week of the five years 1905–09. The causes of 33, or 0·8 per cent., of the deaths registered during last week in the 77 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Hull, Salford, and in 50 other smaller towns; the 33 uncertified causes of death in the 77 towns included 7 in Liverpool, and 2 each in Manchester, Nottingham, Sheffield, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 796 births and 492 deaths were registered during the week ending Nov. 5th. The annual rate of mortality in these towns, which had been equal to 13·0 and 12·7 per 1000 in the two preceding weeks, rose to 13·6 in the week under notice. During the first five weeks of the current quarter the death-rate in these eight towns averaged 13·3 per 1000, and exceeded by 0·3 the mean rate during the same period in the 77 largest English towns. The annual

[3] Ibid., No. 31. Price 5d.
[4] Ibid., No. 29. Price 3d.

death-rates in the eight Scotch towns last week ranged from 8·4 and 9·9 in Perth and Greenock, to 14·4 in Leith and 16·6 in Dundee. The 492 deaths from all causes in the eight towns last week showed an increase of 32 upon the number in the previous week, and included 56 which were referred to the principal epidemic diseases, against 63, 47, and 48 in the three preceding weeks; of these 56 deaths, 23 resulted from diarrhœa, 16 from diphtheria, 7 from whooping-cough, 6 from scarlet fever, 3 from "fever," and 1 from measles, but not one from small-pox. The mean annual rate of mortality from these epidemic diseases in the eight towns last week was equal to 1·5 per 1000, and exceeded by 0·4 the rate from the same diseases in the 77 English towns. The deaths attributed to diarrhœa in the Scotch towns, which had declined in the five preceding weeks from 51 to 25, further fell last week to 23; they included 8 in Dundee, 6 in Glasgow, 5 in Edinburgh, and 2 in Leith. The 16 deaths referred to diphtheria exceeded the number in the previous week by 9; 7 occurred in Glasgow, 6 in Dundee, and 2 in Edinburgh. The 7 fatal cases of whooping-cough all of which were recorded in Glasgow, showed a slight increase upon recent weekly numbers. Of the 6 deaths from scarlet fever, 3 were returned in Glasgow. The 3 deaths referred to "fever" corresponded with the number in the previous week, and included 2 from enteric fever in Glasgow and 1 of cerebro-spinal fever in Dundee. The fatal case of measles occurred in Edinburgh. The deaths referred to diseases of the respiratory system in the eight towns, which had been 80 and 72 in the two preceding weeks, rose to 84 last week, but were 24 below the number in the corresponding week of last year. The causes of 17, or 3·5 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,799 persons, 564 births and 334 deaths were registered during the week ending Nov. 5th. The mean annual rate of mortality in these towns, which had been equal to 16·9, 17·4, and 16·8 per 1000 in the three preceding weeks, declined to 15·1 in the week under notice. During the first five weeks of the current quarter the annual death-rate in these Irish towns averaged 16·4 per 1000; the mean rate during the same period did not exceed 13·0 in the 77 largest English towns and 13·3 in the eight principal Scotch towns. The annual death-rate during last week was equal to 18·1 in Dublin (against 13·1 in London), 14·4 in Belfast, 11·0 in Cork, 10·8 in Londonderry, 23·2 in Limerick, and 7·8 in Waterford; the mean annual death-rate last week in the 16 smallest of these Irish towns did not exceed 12·4 per 1000. The 334 deaths from all causes in the 22 town districts last week showed a further decline of 38 from the numbers in the two preceding weeks, and included 28 which were referred to the principal epidemic diseases, against 42 and 33 in the two preceding weeks; these 28 deaths were equal to an annual rate of 1·3 per 1000, the rate from the same diseases last week being 1·1 in the 77 English towns and 1·5 in the eight Scotch towns. The 28 deaths from these epidemic diseases in the Irish towns last week included 14 from diarrhœa, 4 from measles, 4 from scarlet fever, 3 from diphtheria, 2 from "fever," and 1 from whooping-cough, but not one from small-pox. The deaths attributed to diarrhœa, which had been 20 in each of the two preceding weeks, declined last week to 14, of which 5 occurred in Dublin and 6 in Belfast. The 4 fatal cases of measles included 3 in Belfast; and of the 4 deaths from scarlet fever, 3 occurred in Dublin and 1 in Belfast. The 3 deaths from diphtheria corresponded with the number in the previous week. A fatal case both of typhus and enteric fever was registered in Dublin. The deaths in the 22 towns last week included 60 which were referred to pneumonia and other diseases of the respiratory system, against 63 and 66 in the two preceding weeks. The causes of 11, or 3·3 per cent., of the deaths registered last week in the Irish towns were not certified; in the 77 English towns the proportion of uncertified deaths last week did not exceed 0·8 per cent., while in the eight Scotch towns it was equal to 3·4 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeon: G. A. Dreaper to the *Hawke* for voyage out, and to the *Hermes*, on recommissioning. Staff-Surgeon: R. H. Mornement to the *Eclipse*, on recommissioning. Surgeons: D. D. Turner to the *Hawke*, for voyage out, and to the *Hermes*, on recommissioning; D G. Addison-Scott to the *Imogene*, additional, and on recommissioning; C. R. M. Baker to the *Pomone*, additional, for Dartmouth College; J. H. Wright to the *Antelope;* and W. C. B. Smith to be lent temporarily to R.M. Division, Portsmouth.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant William M. Browne to be Captain (dated August 1st, 1910). Lieutenant John H. Bell is confirmed in his rank.

ROYAL ARMY MEDICAL CORPS.

Colonel J. C. Culling, on arrival home from Bermuda, has been appointed Administrative Medical Officer of the Western Command. Lieutenant-Colonel J. Maher has been transferred from Potchefstroom to Wynberg and appointed to the medical charge of the military hospital. Lieutenant-Colonel J. M. Irwin, from Woolwich, has joined for duty at Tientsin and taken over the appointment as Senior Medical Officer to the Forces in North China, vice Major A. C. Fox. Lieutenant-Colonel S. G. Allen, recruiting medical officer, London District, has embarked for a tour of duty at Gibraltar. Lieutenant-Colonel J. J. Russell has taken up the duties of Staff Officer to the Principal Medical Officer of the Southern Command in place of Major G. B. Stanistreet, whose tenure of appointment has expired. An exchange of stations in India has been sanctioned by the War Office between Lieutenant-Colonel G. E. Hale, D.S.O., and Major W. W. O. Beveridge, D.S.O. Major W. P. Gwynn has been appointed Embarkation Medical Officer at Karachi for the trooping season of 1910–11. Major B. J. Innis has been granted leave on private affairs from Nov. 7th to Dec. 26th, with permission to travel in the West Indies. Major E. A. Burnside, from Tidworth Park, has been posted to Golden Hill. Major E. G. Browne has embarked for a tour of service in India from the Dublin District. Major B. W. Longhurst, from Warley, has taken up duty at Ashton. Major F. J. Wade-Brown, from Cork, has been posted to Kilworth Camp. Major E. S. Clark has been transferred from Ballykinler Camp to Belfast. Major J. McD. McCarthy has joined at Chester from Chapel Bay Camp. Major J. B. Anderson, from the London District, has been appointed Embarkation Medical Officer at Southampton. Captain C. A. J. A. Balck has been selected for appointment as Specialist in Physical Training for the Irish Command and posted to the Curragh Camp, vice Captain H. A. Davidson, who reverts to ordinary duty. Captain C. S. Smith, from Mullingar, has been posted to Donard Camp. Captain J. T. McEntire, from Chilwell Camp, has joined at Newcastle. Captain H. F. Shea has left the London District for a tour of service in India. The following officers, on conclusion of their course of instruction for promotion at the Royal Army Medical College, have been posted as follows: Captain W. L. Steele to Tidworth Park, Captain W. Riach to the London District, Captain A. R. C. Parsons to the Scottish Command, Captain J. H. R. Winder to Shorncliffe, and Captain D. L Harding to Belfast. Captain E. M. O'Neill has been transferred from Jhansi to Nowgong. Captain B. A. Craig has arrived home on leave from Hong-Kong. Lieutenant J. C. L. Hingston, from Tidworth Park, has embarked for service in India. Lieutenant F. H. Somers-Gardner, from Hilsen, has joined for duty at Cosham.

INDIAN MEDICAL SERVICE.

Colonel J. A. Cunningham, civil surgeon of Lahore, has been selected for the appointment of Inspector-General of Civil Hospitals in the Central Provinces in succession to Colonel P. A. Weir, who has completed the tenure of his appointment. Lieutenant-Colonel J. R Adie, civil surgeon of Ferozopore, has been placed on special duty in connexion with the investigation of antimalarial measures in the Punjab. Major F. O'Kinealy, civil surgeon of Simla, has arrived home from India preparatory to taking up his

appointment as Surgeon on the staff of H.E. the Viceroy-elect of India. Major G. Lamb, Bombay, has been granted four months' extension of his leave on medical certificate. Major G. Hutcheson, on completion of a special course of instruction at the Central Research Institute, Kasauli, has been posted as Civil Surgeon to Aligarh. Captain C. Dykes has received an extension of his leave home from India. The services of Captain W. Lapsley have been placed at the disposal of the Government of the United Provinces. Captain G. Holroyd, Captain A. W. Greig, Captain W. M. Houston, and Captain C. E. Southon, Bombay, have arrived home on leave from India. Captain S. R. Christophers has been appointed Assistant to the Director of the Central Research Institute at Kasauli. Captain W. S. Patton and Captain T. H. Gloster have been appointed to the Bacteriological Department. The services of Captain S. B. Mehta have been placed by the Commander-in-Chief at the disposal of the Government of India for employment at Amritsar. Captain J. W. Little has been granted eight months' combined leave home from India. Lieutenant J. A. Shorten has been appointed Specialist in Radiography and Electrical Science to the Second (Rawal Pindi) Division.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st East Anglian Field Ambulance, Royal Army Medical Corps: Lieutenant Octavius Roberts Ennion, from the list of officers attached to units other than medical units, to be Lieutenant (dated Oct. 3rd, 1910).

2nd Lowland Field Ambulance, Royal Army Medical Corps: Lieutenant David Shannon to be Captain (dated Sept. 15th, 1910).

Attached to Units other than Medical Units.—Lieutenant-Colonel and Honorary Surgeon-Colonel James B. Ronaldson resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Nov. 9th, 1910).

For attachment to Units other than Medical Units.—Jacob Frederick Farrow to be Lieutenant (dated Sept. 6th, 1910).

DEATHS IN THE SERVICES.

Brigade-Surgeon J. M'Neill Beatty, A.M.D. (retired), on Oct. 27th, aged 82 years. He entered the service in 1854 as assistant surgeon and became surgeon in 1867, retiring with the honorary rank of brigade surgeon in 1880.

Deputy Surgeon-General C. Graves Irwin, late Army Medical Staff, on Oct. 23rd, aged 79 years. He joined the service in 1854, becoming surgeon in 1863, surgeon-major in 1873, brigade-surgeon in 1880, and Deputy Surgeon-General in 1884, retiring in 1891. He served in the Eastern campaign of 1854–55, and was present at the battle of the Alma and at the siege and fall of Sevastopol (medal with two clasps and the Turkish medal).

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

Among the papers in the November issue of the *Journal of the Royal Army Medical Corps* is one by Colonel Sir David Bruce, C.B., F.R.S., Captain A. E. Hamerton, D.S.O., R.A.M.C., Captain H. R. Bateman, R.A.M.C., and Captain F. P. Mackie, I.M.S., on "Muhinyo,"[1] a disease of the natives of Uganda, which has its principal focus along the eastern shore of Lake Albert Edward. The disease is characterised by fever, profuse sweating, pain in the joints and along the course of nerves, swelling of the various joints, especially the ankles, and extreme weakness and emaciation. The writers conclude (1) that "Muhinyo" is Malta fever, and (2) that it is conveyed from the goat to man by the drinking of goat's milk. The Medical History of the South African War is continued by Lieutenant-Colonel R. J. S. Simpson, C.M.G., R.A.M.C., and Recruiting in the German Army is the subject of a paper by Captain J. A. Black, R.A.M.C.

[1] Reprinted from the Proceedings of the Royal Society.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The annual dinner of the Royal Free Hospital and School of Medicine for Women will be held at the Trocadéro Restaurant, Piccadilly-circus, on Dec. 14th. Price of tickets, 7*s.* 6*d.* Mr. E. W. Roughton will take the chair. Applications for dinner tickets should be sent to the honorary secretaries, Dr. A. G. Phear, 47, Weymouth-street, W., or Mr. T. P. Legg, 139, Harley-street, W., not later than Dec. 1st.

Correspondence.

"Audi alteram partem."

THE ECONOMIC ASPECT OF SANATORIUM TREATMENT.

To the Editor of THE LANCET.

SIR,—I have to thank you for your kind and appreciative notice of my annual report which appeared in THE LANCET of August 13th. In that report I endeavoured to show that an expenditure of £500 not only makes 24 men wage-earners for nine months and postpones and diminishes their chargeableness to the guardians in that time, but it also makes eight men permanent wage-earners and saves an expense from the rates within the next ten years of £1820. This conclusion you criticised on the ground that there was not sufficient evidence to show what would have happened to the wage-earners if they had not gone to the sanatorium. As you say, all depends upon the nature of the cases on admission. In order to test the justification of your criticism I have been at some pains to find out what has occurred in notified cases of consumption who did not go to the sanatorium. This inquiry has taken some time, hence the delay in sending this letter.

I have endeavoured to follow up 278 cases who were notified in the years 1905–06, cases which went to the Peppard Sanatorium being excluded. To make this class of notified cases comparable with the cases which went to Peppard Sanatorium it is desirable also to deduct all cases which died within three months of notification, for most of such would no doubt have been considered unsuitable for sanatorium treatment. There were 88 who died within three months. This leaves 190 notified cases who did not go to the sanatorium but lived three months after notification. Of these it was found on inquiry in October that 100 had died and 16 were still alive, leaving 74 who could not be traced. Assuming that the proportion of dead and alive among the 74 is as 100 to 16, we have an estimated total of 164 dead and 26 alive. Thus 14 per cent. of the notified cases are estimated to be alive. Taking now the Peppard Sanatorium cases in the same years 1905–06 we find there were 50 notified cases, of whom 21 are known to be alive and 22 dead. Of the 7 unaccounted for several went to Canada and are probably living there. Estimating that 25 are alive we have 50 per cent. of sanatorium cases alive compared with 14 per cent. of other notified cases. I think this result justifies, to a large extent, my statement that most of the men who went to the Peppard Sanatorium would have died within two or three years but for the sanatorium. It is true a certain amount of selection is exercised in sending cases to the sanatorium. No case is sent which appears likely to die within three months' time. Febrile cases are sent if, after a rest of a few days in bed, their evening temperature is below 100°. Cases are not sent when they have advanced disease affecting three lobes on one side of the chest, nor advanced disease affecting one lobe on each side; but cases are sent with fairly advanced disease on both sides. Practically no men have been sent to the sanatorium who were capable of work at the time they were sent. In the large majority of cases work had been discontinued. In a few cases, though work had not been discontinued, it was highly desirable that it should be. One case had been discharged from the dockyard, and many others would have been discharged from work in the arsenal except for the prospect that sanatorium treatment would enable them to resume work. Among those who did not go to the sanatorium, although there were a certain number of cases too advanced for admission, there were, on the other hand, many cases of mistaken diagnosis, whereas all the cases found not to be tuberculous were excluded from the sanatorium cases. It must be remembered also that many who did not go to Peppard Sanatorium went to some other sanatorium, and many of those who went to the workhouse infirmary had the advantage of open-air treatment there.

The Woolwich cases are sent to Peppard in the first instance for one month only. Very few stay as long as six months, and none longer, unless they become "working patients" and maintain themselves at the sanatorium. This

arrangement enables patients to be discharged if it is found that they are not likely to benefit at the sanatorium, and encourages the sending of more advanced cases than would be sent if there were a fixed duration of stay of from 3 to 6 months. The average duration of stay in 1909 was 2½ months. It is, as you point out, difficult to give figures which absolutely prove the benefit of sanatorium treatment, but although experience shows the limitations of this treatment it also more and more convinces me of its decided advantages.—I am, Sir, yours faithfully,

SIDNEY DAVIES, M.D. Oxon.,
Medical Officer of Health of Woolwich.

Nov. 3rd, 1910.

ACUTE ANTERIOR POLIOMYELITIS AFTER BATHING.

To the Editor of THE LANCET.

SIR,—I have read with interest the records of two cases published in THE LANCET of Oct. 8th, p. 1083, by Mr. C. R. Sutherland and Dr. W. Robinson, in which paralysis, regarded as acute anterior poliomyelitis, developed in two brothers after bathing in the river Wear. Three years ago I saw in consultation a case of paralysis of all four limbs which presented the clinical features of acute anterior poliomyelitis, and terminated fatally. The boy had spent two hours in the water in a public swimming bath in Manchester one September afternoon. Next day he was unwell, and was never able to attend school afterwards. At first there were slight febrile symptoms and headache, suggesting commencing meningitis; but at the end of a week paralysis of both legs developed, the knee-jerks and tendo Achillis reflexes were lost, the arms and intercostals became paralysed a few days later, and death occurred from respiratory paralysis. There was no anæsthesia, and the bladder and rectum were not affected. Though no necropsy was obtained, I have no doubt the case was one of acute anterior poliomyelitis. A school friend of this boy was with him at the swimming bath and spent about the same time in the water. He also was unwell from that time. I did not see this case, but he died the day after the patient whose history I have just briefly recorded. A definite diagnosis had not been made, but I have heard that the symptoms pointed to an acute affection of the nervous system.

Twenty years ago I recorded a case of acute anterior poliomyelitis in a young adult. His illness directly followed a visit to a public swimming bath, and the patient regarded this as the cause of his paralysis; but at that time I regarded it as a mere coincidence. The disease terminated fatally. I examined the spinal cord microscopically and found the typical changes of acute anterior poliomyelitis. Allen Starr states in his book, "Organic Nervous Diseases" (London, 1903), that he has seen "several children who were attacked with infantile spinal paralysis subsequent to long-continued bathing in cold water during the summer." Much light has been thrown on the etiology and pathology of acute anterior poliomyelitis by observations during the recent epidemics of the disease in Norway, Sweden, Germany, and America, and by the recent experiments on animals (Landsteiner and Popper, Flexner and Lewis, and others), which have clearly proved that the disease can be transmitted to monkeys by the injection of an emulsion of the diseased human spinal cord. From the experiments and observations of Landsteiner and Levaditi, and of Flexner and Lewis, and others, it appears probable that the poison is transmitted by the salivary and nasal secretions, and that it enters the system through the mucous membrane of the nose, fauces, and alimentary canal. Much is still obscure, however, with regard to the exact cause of the disease. Of course, it is only in very rare cases that the disease has followed bathing, but such cases are worthy of careful investigation in the future. It is possible that a poison in the water may enter the system through the nose or fauces whilst bathing, or that the long exposure of the system to cold may lower its resisting power and make it more susceptible to the action of micro-organisms; but it appears very improbable that in the few cases on record the development of the disease after bathing has been a mere coincidence.

I am, Sir, yours faithfully,

R. T. WILLIAMSON.

Manchester, Nov. 8th, 1910.

EFFICIENT VENTILATION.

To the Editor of THE LANCET.

SIR,—If Dr. Th. Glover Lyon would be good enough to repeat his experiment of entertaining his 20 guests in a room 20 feet by 15 feet by 10 feet, and will observe the wet bulb when he cuts off the air-supply, and then cool the air in the room instead of replenishing the air, he would find, I think, that the discomfort of his guests varies with the wet-bulb temperature, and has nothing to do with the chemical purity of the air. Before taking refuge in his hypothetical "spiral toxes" we must eliminate, I think, the potent cause of our discomfort—a high wet-bulb temperature. This is particularly uncomfortable to one who has his temperature sense organs adapted to a cooler atmosphere. It is, I believe, owing to the curious "adaptation" of the temperature sense organs that we are so struck with the unpleasantness of hot crowded rooms when coming into them from fresh air. When "set" for warmth we do not like a draught of cold air, when "set" for cool air we do not like warm moist air. Not only do the temperature sense organs adapt themselves to the surroundings, but the olfactory sense quickly fatigues; thus the sewer man does not notice the smell after a few minutes in the sewer, neither do the guests in a crowded room. There is very great relief to be had from fans in conditions where pure air cannot be obtained, and I would urge most strongly this simple means on all who cannot instal expensive and often useless systems of ventilation. The point I insist on, following in the steps of Dr. John Haldane, is that our efforts should be directed towards keeping down the wet-bulb temperature. A good ventilation, of course, brings down the wet-bulb temperature. Until the heat factor has been eliminated we have no right to talk of mysterious poisons in the air of crowded rooms, for the unpleasant skin sensations arising from hot moist air have a most profound effect on our mental well-being. I agree with Dr. John Haldane that the wet-bulb temperature should not be allowed to exceed 70°–75° F. for the comfort of workers to be secured. Cool air is, I venture to maintain, more important than chemically pure air in our dwellings and factories.

I am, Sir, yours faithfully,

LEONARD HILL.

London Hospital Medical College, Nov. 8th, 1910.

FIRST OPERATION UNDER ETHER.

To the Editor of THE LANCET.

SIR,—I am much obliged for your reference to the *Pharmaceutical Journal* for a report of the above, but the house surgeon, Mr. Ransome, incorrectly reported the date. Through the courtesy of the Surgical Registrar of University College Hospital I have had the pleasure of reading the complete notes on the case of Churchill. These notes are full and taken on consecutive days. The day of the operation was Monday, Dec. 21st, 1846. It was on Saturday, Dec. 19th, that Dr. Boot wrote to Liston as to the success of the anæsthesia produced by ether. On that day Mr. Robertson, a dentist, removed some teeth, having previously administered ether (see Buxton's "Anæsthetics"). Dr. Boot immediately wrote to Liston, sending him at the same time the account from America, and he at once called on his friend Peter Squire, the chemist in Oxford-street, saying, "You must fix up something so that we can try this as soon as possible." This was told me by Mr. Squire's son, to whom his father had often repeated the tale. I have heard from two surviving witnesses of the operation, and one of them is clearly of opinion that the day "was a Monday in December." I think the mistake is quite easily understood. The surgeon's visiting days in Ward 1 have always been Mondays, Wednesdays, and Fridays. It is easy for a busy man to forget which was the one when writing from memory, even if it is only a few days after. I am, Sir, yours faithfully,

F. WILLIAM COCK.

Porchester Houses, Porchester-square, W., Nov. 3rd, 1910.

*** In the *Pharmaceutical Journal*, Vol. VI., No. 8, Feb. 1st, 1847, p. 350, Mr. Squire himself published an account of the apparatus constructed by him for the inhalation of the vapour of ether. At the beginning of that article he refers to "the temporary apparatus which I put

hastily together for Mr. Liston when he performed the first capital operation in this country without a sign even of pain." Illustrations of the apparatus are also published in the same place. Dr. Francis Boott (the London Medical Directory for 1846 misprinted his name as "Francis Booth." His name was really Boott) communicated to THE LANCET of Jan. 2nd, 1847, p. 5 *et seq.*, copies of papers and letters relating to "Surgical Operations Performed During Insensibility." In Dr. Boott's letter, on p. 8, he mentions the extraction of a tooth on Dec. 19th, 1846, by a Mr. Robinson (not *Robertson*), and he also includes a copy of a letter from Mr. Robert Liston to himself, which is dated Dec. 21st, 1846, and commences "I tried the ether inhalation to-day in a case of amputation of the thigh, and in another requiring evulsion of both sides of the great toe-nail.' This confirms Dr. Cock's supposition that Mr. Ransome, the house surgeon, gave the date of the operation wrongly as "Friday, December 18th, 1846, at 2 o'clock."—ED. L.

THE LONDON COUNTY COUNCIL AND MEDICAL FEES FOR SCHOOL ACCIDENTS.

To the Editor of THE LANCET.

SIR,—I have to inform you that the Council has recently had under consideration the question of fees to be paid for the first medical attendance on children who meet with accidents in public elementary schools, and has adopted the following scale, which will come into operation as from 1st December, 1910 :—

(*a*) In the case of a child who meets with an accident in the school and who is taken to a doctor's surgery, 3*s.* 6*d.*

(*b*) In the case where a doctor is summoned to the school to attend a child, 5*s.*

Claims in excess of these amounts will, if there are exceptional circumstances, receive special consideration. These fees will be paid by the Council for the first attendance only.

I am, Sir, your obedient servant,

G. L. GOMME,
Clerk of the Council.

County Hall, Spring gardens, S.W., Nov. 9th, 1910.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Crematorium.

IT is now eight years since the Manchester Crematorium was opened, and during this period 1428 cremations have taken place. In the 12 months ending on August 31st last there were 110 cremations. Some of the subjects were from Manchester and the neighbourhood, but 15 places outside Manchester helped to make up the total. Among these were several of the Lancashire towns and places so far distant as Edinburgh, Penmaenmawr, Macclesfield, Stoke-on-Trent, Aysgarth in Yorkshire, and others. The directors in the annual report urge the need for propaganda in favour of cremation—"as there is still a considerable amount of prejudice and indifference to be overcome." In the course of his speech, Mr. Gustav Eckhard, presiding at the annual meeting of the Manchester Crematorium, Limited, mentioned the fact that many famous men had been cremated during the last 12 months, and touched also on the religious question connected with cremation. He combated the notion that it was an irreverent method of disposing of the dead, and said that "three successive holders of the see of Manchester—Bishops Fraser, Moorhouse, and Knox—had expressed themselves in favour of cremation as a means of disposal of the dead. There are, no doubt, advantages and disadvantages in all modes of putting the dead out of our sight, but in the case of pestilence, infection, or the slaughter of the battlefield, there is no better method of dealing with human remains than that of cremation. Still, there does exist a sentiment, not easily to be overcome, in favour of earth burial, and it will linger as long as England has country churchyards.

A Slot Meter Danger.

Penny-in-the-slot gas-meters are much used by the working classes in our large towns, and usually without accident. A few days ago, however, four children at Stockport had a narrow escape from being asphyxiated from one being used. During the night the supply of gas became exhausted and one of the daughters, before going to work in the morning, put a penny in the slot, not knowing that a light had been left burning in the room where the children were sleeping. The light having gone out, the gas of course escaped into the room, and when the occurrence was discovered, owing to the moaning of the children, they were found to be unconscious. One had to be taken to the infirmary, but happily all recovered in the course of a few hours. It is, perhaps, a wonder that such an accident is not of more frequent occurrence where a penny is put into the "slot" or gas turned on at the meter. At all events, it points to the desirability of seeing to it that no gas taps are left turned on.

Treating Consumption.

The old Chorlton Union Board of Guardians is now called the South Manchester Township Board, and the subject of provision for consumptive cases came under discussion at the last meeting. The board seems to be in earnest as to building a sanatorium, the chairman saying that as the result of advertising numerous sites could be obtained. A letter was read from the sanitary committee of the city council, suggesting an interview with the board on the subject of the treatment of consumptive cases. The feeling on the board seemed to be in favour of proceeding with its own scheme, whatever the corporation might do, as its own efforts and the corporation's would not for a long period meet the demand. There are said to be 5000 or even 6000 cases in Manchester supposed to be curable, the provision for which may well tax all the efforts of the guardians, the corporation, and of private benevolence to deal with, more especially if it is remembered that the father or the mother of the family may be the victim. One of the medical members of the board remarked that "the guardians must deal with the poor, for the corporation would only deal with the lower middle or upper working classes."

The Asylum Difficulty.

The crowded state of the asylums and the consequent detention of dangerous lunatics in workhouses where there is no suitable or sufficient provision for the safe care of such patients is often a topic at meetings of our boards of guardians. At the last meeting of the Prestwich board the clerk drew attention to this "vexed problem of long standing." There were at the time two men in the workhouse certified as fit cases for the asylum, and one of them had just committed two assaults. He (the clerk) had written to the authorities at Winwick, Lancaster, and Prestwich, and the reply from each had been that there was no room for additional male patients. He said "it was a most serious matter, and the workhouse master was having an anxious time of it." The clerk was instructed to write to the Asylums Board in the strongest possible terms in regard to the difficulty. The increase of insanity is a grave national danger.

Cotton Districts Convalescent Fund.

The annual meeting of the governors of the above-named fund, reminding many of the hard times of the Lancashire cotton famine resulting from the American war of North and South, was held on Oct. 28th. Its work, begun nearly 40 years ago, still goes on, for during the nine months ending Sept. 30th 1512 patients were sent to the convalescent hospitals at Southport, Buxton, and Cheadle at a cost of £4209. In the corresponding period of last year 2374 patients were sent at a cost of £4093.

Nov. 8th.

UNIVERSITY OF SHEFFIELD.—The Council at its last meeting appointed Mr. Archibald W. Cuff, F.R.C.S. Eng., to the post of Lecturer on Practical Surgery.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

The Chapel in the Royal Infirmary.

REFERENCE has been made in these columns to the controversy connected with the chapel in the Royal Victoria Infirmary in this city.[1] It may be remembered that, when the new infirmary was erected a few years ago, a chapel was constructed for the institution. This, no doubt, was done following the precedent of the presence of a chapel in the old infirmary from its beginning. This new chapel was consecrated as a Church of England edifice, and enjoyed a brief usage for the ordinary services in vogue in the institution. Other denominations wishing to hold services in the infirmary were allowed the use of the lecture theatre for the purpose. After some little time the question arose as to whether Nonconformists could not have equal rights to conduct their own particular services in the chapel (St. Luke's). After much expenditure of time, talk, and several governors' meetings, and when it had been decided by expert opinion that it would be illegal to use the chapel for Nonconformist services, the entire closure of the edifice was voted at a governors' meeting in February, 1908. On August 27th of this year the quarterly court of governors passed a resolution rescinding the closure of the chapel and "instructing the house committee to reopen St. Luke's Chapel for religious services and to provide facilities for Anglican, Free Church, and such other services as may be required in the interests of patients and staff." The house committee meeting on Sept. 22nd discussed the situation at length, Sir George Hare Philipson presiding. It was eventually resolved that the committee could not carry out the order given at the court in August. The reason for this attitude is found in the opinion of the infirmary's legal advisers that any governor could easily get an injunction against the house committee should they carry out the governors' instructions, and that the cost of such injunction would have to be paid by members of the house committee personally; and further that refusal of members to pay such costs, or, in case of the house committee, refusing to obey the injunction the members might be imprisoned for contempt of court.

The whole situation was discussed again at a special court of governors held on Oct. 22nd, when Sir George Hare Philipson presided. Notice was given previous to the court that Alderman Goolden would move a proposition with a view to settling the difficulty:—

> That a separate chapel be erected and equipped for the use of Nonconformists, and that it be paid for out of the same funds as St. Luke's Chapel was built out of, and that the amount to be so expended shall be similar, if necessary, to the sum paid for the erection and equipment of St. Luke's Chapel.

The result was a stormy meeting, several amendments having been put down on the agenda. In order to clear the way Alderman Goolden withdrew the motion standing in his name in favour of the first amendment, proposed by the Lord Mayor, Sir William Stephenson, who suggested that the question as to the validity of the consecration as an Anglican edifice be settled by the High Court of Justice. He deprecated the continuance of the controversy and wished to get the matter settled once and for all; the cost of this process would be £200 or £300, and in reply to an interruption he said he would settle the bill himself if no one else did. This amendment was carried after opposition, and a committee was appointed to take the question to the High Court.

The account of these proceedings cannot be very edifying to the outside public, especially to that portion which helps voluntary institutions by its support, and no doubt such a public, whatever its individual creed, would prefer a secular hospital to one in which religion has induced so much controversy. There is a large section of the community here which cannot see the necessity for a chapel at all in the infirmary. The average stay of patients is not long, the pressure on the beds is great, and in the vast majority of cases when the patient is well enough to attend services he is well enough to go home, and wants to do so. The opinion of the public is varied: first, as to the wisdom of the house committee in allowing a considerable sum (it is believed about £3000 or £4000) to be spent on a chapel; secondly, in having it consecrated in the Anglican Church, thereby preventing its use by any other denominations; and thirdly, as to the entirely altruistic attitude of the general court of governors concerning religious equality. Many fear that the attitude has been adopted in view of the large proportion of the funds subscribed by the working man. It is to be feared that the working man, as distinct from the poor man, has forgotten the purpose for which the infirmary was built—to relieve the sick and lame poor—and now looks upon his penny and twopence a week as paid in support of a provident institution, to which he contributes and from which he expects to receive return. While the £16,000 contributed last year by the workmen is highly creditable to the subscribers, each man is apt to forget that he and his fellow workers have not contributed to the endowments to the building, which have been from time to time made by charitable people in legacies and gifts. Further, it may be asked if you build a chapel for Nonconformists what are you going to do for the Roman Catholic or for the Hebrew? One speculates as to the appearance of the hospital when it is surrounded by all sorts of little chapels dotted about its grounds, to say nothing of the expense of such a process. The independent and impartial observer, who cuts himself off from all parties and creeds while he forms his judgments, will wish heartily that the matter may be finally closed by the decision of the courts—and if a peaceful solution be not thus reached he would be glad if the chapel might remain closed, or even got rid of altogether.

Nov. 8th.

[1] THE LANCET, March 20th, 1909.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The Treatment of Consumption in Bristol.

THE Bristol board of guardians has, after several animated discussions, rejected the proposition to buy an estate in Somersetshire, a few miles out of Bristol, for the purpose of equipping it as a sanatorium for paupers suffering from pulmonary tuberculosis. The alternative plan—namely, development of their premises at Southmead, which are already chiefly used for the treatment of phthisis—has been adopted, and a subcommittee appointed to consider ways and means.

Vaccination by the Bristol Board of Guardians.

The latest vaccination returns issued by the Bristol board of guardians show that vaccination is still decreasing. For the year ended Sept. 30th, 1910, 2514 primary vaccinations were performed at the expense of the poor-rates, compared with 3081 for the corresponding period of 1909.

The Bristol Medical School.

The annual dinner will take place on Nov. 29th, at the Royal Hotel, College Green, at 7.30 P.M. Mr. James Taylor is president and the guest of the evening will be Sir Alfred Keogh, retired Director-General, Army Medical Staff.

Medical Service at Torquay.

On Sunday afternoon, Oct. 23rd, a special service for medical men and nurses was held at St. Luke's, Torquay. There was a large congregation, which included about 30 members of the medical and 50 of the nursing professions. The sermon was preached by the vicar (the Ven. A. H. Simms, Archdeacon of Totnes), who in the course of an eloquent address alluded to the work of the priest and physician, and showed how both should work together for the sick and suffering.

The West of England Eye Infirmary, Exeter.

The annual meeting of the subscribers to the West of England Eye Infirmary was held on Oct. 28th. The medical report stated that during the past 12 months 3710 patients had been treated. The daily average number of in-patients was 42. The financial statement was satisfactory. The committee alludes to the completion of the new wing which was erected to commemorate the centenary of the institution.

It was formally opened, free from debt, by Earl Fortescue on Sept. 21st last.

The Yeatman Hospital, Sherborne.

The proprietor of a travelling bioscope entertainment, named Rowland, has been made a life-governor of the Yeatman Hospital, Sherborne (Dorset), in recognition of his financial assistance to the institution. By means of "benefit nights" Mr. Rowland has during the past few years received £116 for the hospital funds.

Nov. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

General Council of the University of Edinburgh.

THE statutory half-yearly meeting of the Edinburgh University General Council was held on Friday, Oct. 28th. The meeting had the unusual distinction of being presided over by the Lord Chancellor of the University, the Right Hon. A. J. Balfour, M.P. In the report of the Business Committee reference was made to the fact that the Treasury, acting on the advice of Lord Elgin's Committee, were to make an additional grant of £40,000 per annum to the Scottish universities, of which sum £12,500 would come to the University of Edinburgh. The report of the sub-committee on Draft Ordinance (regulations for degrees in medicine) was also submitted. The report approved generally of the terms of the Draft Ordinance and regarded it as an important step in the direction of the autonomy of the universities which the General Council of the University of Edinburgh had long been contending for. The important provisions were those which gave the University power to introduce from time to time reforms in the medical curriculum without the delays and difficulties which were attendant upon procuring a new ordinance on every occasion on which the progress of medical science and teaching seemed to require some modification of the curriculum. With this preliminary expression of approval all who are interested in the maintenance of the position of Edinburgh as a great medical school will wholly agree. One very important proposal in the report was that certain words should be deleted from the Draft Ordinance. The deletion of the words meant that instruction in the subjects of the first professional examination might be received in such schools and science colleges as might be recognised by the University Court, and that such courses of instruction could count although attended prior to registration as a medical student. This was intended to allow the subjects to be passed before the commencement of the medical curriculum. This proposal was submitted by Professor E. A. Schäfer and was opposed by Principal Laurie of the Heriot-Watt College; Professor Schäfer's proposal was carried by 21 to 16. The report next suggests that powers should be taken to impose a limit on the number of students attending any one clinic. No objection was raised to this important suggestion. The committee further suggests that a clause should be added to the Draft Ordinance to the effect that changes, which in the past have been usually arranged by the faculties and Senatus and subsequently approved by the University Court, shall be communicated to the General Council, "and representations made thereon by the General Council within two months from the date of communication shall be taken into consideration by the University Court before any such regulation is approved." The adoption of this report concluded the business. The fact that this report on the Draft Ordinance is signed by the professor of physiology as chairman of the subcommittee which drew it up may be taken as a sign that the University realises more fully than it did that proposals and recommendations issuing from the Business Committee of the General Council have the interests of the University at heart. It is indeed highly desirable that the University should be more sensitive to outside movements and opinions than it sometimes is, and the measure of autonomy which the Draft Ordinance asks for would presumably lead to that. When it is realised that the University has no power even to regulate the size of its clinics it will be also realised how hopeless it is to look for change until freedom is obtained. The University is to be congratulated on asking for that freedom.

Lunacy in Glasgow.

The report of Dr. John Carswell, certifying physician in lunacy to the Glasgow parish council, has just been issued for the past year, and there is a note of optimism about it that is very encouraging. The total number of cases reported to the inspector during the year was 1018. Of these, 553 cases were certified insane. This is 25 less than in the previous year, and is the lowest recorded since the year 1906. But the number of cases certified is not an accurate indication of the occurrence of insanity, for included in that is a number of cases previously certified. Thus last year, of 553 cases certified, only 392 were certified insane for the first time, the remainder having been previously under certificate. The figure 392 therefore represents the true occurrence of insanity in Glasgow parish during the year 1909–10. This is 49 fewer persons than in the previous year, and it is the lowest number since 1906. On an estimated population of 660,713 the number of persons certified insane for the first time represents a production-rate of 56·3 per 100,000, the lowest for the last ten years. During the last ten years the rate has fluctuated between 56·3 per 100,000 last year and 70 per 100,000 in 1902. The average annual rate for the first five years of the decade was 66·6 and for the second five years it was 63·7, a decrease of 2·9 per 100,000. This is similar to what is occurring throughout Scotland. The average annual production-rate for the whole of Scotland was 50 per 100,000 during the five years 1900–04 and it fell to 46 during the years 1905–09. It is worthy of note that the higher production-rate in Glasgow is largely due to the inclusion in the Glasgow record of first cases, of imbecile children, and also of certain Glasgow cases brought from other districts, and by a somewhat lower estimate of population than that used by the Commissioners in Lunacy. Dr. Carswell shows in his report that the decrease has occurred in the young and active sections of the population, between the ages of 15 and 45 years, who should, presumably, be most directly affected by the alleged overpressure of modern industrialism. A slight increase is noted in cases of insanity amongst older people, but this is, in part at least, attributable to the fact that many cases of senile decay are now remitted to asylums instead of being treated elsewhere. In discussing the distribution of the cases, the wards are divided into three groups according to whether the insanity-rate is high, low, or average. It is worthy of note that the wards which had high lunacy-rates had high death-rates, and it may be added that there are about three times as many public-houses relatively to the population in the first set of wards as there are in the second and healthier set. These figures go far to prove that the slum is just as much responsible for insanity as it is for physical deterioration.

Clinical Research Laboratory for Victoria Infirmary, Glasgow.

The Victoria Infirmary, Glasgow, has been put in possession of a handsome gift from an anonymous donor for the purpose of building and equipping a laboratory for clinical research. The gift amounts to £5000. The Western Infirmary, Glasgow, is also adding a laboratory on the same lines.

Infectious Disease in Dundee.

A serious increase in the number of cases of infectious disease occurred in Dundee during October. The total was 395, as against 246 in September and 152 in October of last year. Scarlet fever last month rose from 127 cases to 196, while diphtheria had increased from 53 to 91. Whooping-cough exactly doubled—44, as against 22; while chicken-pox rose from 11 to 41. Typhoid fever and erysipelas were both down. In October of last year there were only 97 cases of scarlet fever and 30 of diphtheria.

Typhoid Fever Outbreak in Strichen.

A serious outbreak of typhoid fever has occurred in the village of Strichen, fully a dozen cases having been notified to the medical authorities. At a meeting of the public health standing subcommittee of the Deer district a report on the matter by the medical officer of health was considered. From this it appears that the majority of the patients had received milk from the same dairy, but the medical officer reported that he had failed to find any source of specific contamination of the milk. He suggested, however, that the dairyman should be asked to try the effect of engaging other employees at the dairy to milk the cows and handle the milk,

and if necessary that new utensils should be provided. The committee considered the evidence as scarcely sufficient to warrant it in stopping the supply of milk from the dairy in question. The suggestions of the medical officer were approved, and he was authorised to make provision for these measures, and such others of a similar kind as might suggest themselves to him, being carried into effect without delay. It was also decided to have a report upon the water and drainage systems of the village.

Northern Infirmary, Inverness.

The half-yearly general meeting of the managers of the Northern Infirmary, Inverness, was held on Nov. 2nd, when the following motion was carried:—

That in view of the revenue account in bank being at present considerably overdrawn, the directors be authorised to withdraw from capital account a sum not exceeding £1000.

Ex-Provost Gossys was cordially thanked for the excellent services rendered by him as chairman during his term of office in the occupancy of the civic chair.

Birth-rate in Aberdeen.

As in other places the birth-rate in Aberdeen is decreasing, and that to a very considerable extent. The population of Aberdeen calculated by the Registrar-General is 185,703 for the present year, and on that basis the birth-rate for the districts of St. Machar and St. Nicholas works out at 16·7 per 1000. It is, however, slightly higher than that, because the population has not grown quite so rapidly recently as between 1891 and 1901, the dates of the two last censuses. The birth-rate has, however, fallen considerably in the last 30 to 40 years, but more particularly in the last 10 to 20 years. In 1866 to 1875 the average birth-rate was 36·2 per 1000 of population, in 1876 to 1885 it was 34·4, in 1886 to 1895 it was 32·2, and in the five years from 1899 to 1903 the birth-rate was 31·2 per 1000, which may be considered pretty accurate, as the present slackening in the growth of the population did not show itself much until after 1903. In the five years 1904 to 1908 it may be taken at 28·5 per 1000, and according to the Registrar-General's estimate the birth-rate for 1909 was 24·8; this, however, for various reasons might be put at 26 per 1000, a figure still very much below the 36·2 of 40 years ago. The reduced birth-rate has not until lately affected the normal increase of the population, because of the coinciding fall in the death-rate. The excess of the birth-rate over the death-rate was in 1866 to 1875 13·2 per 1000 of the population, which represented the normal increase apart from the effects of emigration or immigration. In the five years from 1899 to 1903 the difference between the birth-rate and the death-rate was 13·1; but in 1907 the difference was only 12·2, and in 1908 it was 11·2, while in 1909 it was about 10·7. In his report for 1908 Dr. Matthew Hay worked out the relations of births to marriages to ascertain whether the decline in the birth-rate was due to the diminution in the marriage-rates. He found it was not so. In the period from 1866 to 1875 the average number of births to each marriage was 4·4, which gradually fell to 3·3 in the five years ending 1908.

Stirling Royal Infirmary.

At the annual meeting of the supporters of the Stirling Royal Infirmary it was stated that in response to the appeal made by the directors for the sum of £12,000 for extending the infirmary £8150 had been already promised. The directors have decided to proceed with that part of the extension which involves the erection of the west wing at a cost of £4250. This building is now well advanced, and it is hoped that it will be ready for occupancy by next spring.

Nov. 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mastership of the Rotunda Hospital.

THE Master of the Rotunda Hospital holds office for seven years, and last week Dr. E. Hastings Tweedy, having completed his term, handed over the duties to his successor, Professor Henry Jellett. A few days prior to his leaving the hospital a handsome presentation of a silver tray was made to Dr. Tweedy by the nursing staff and pupil nurses who had been trained under him. The governors of the charity, before electing a successor, passed a warm resolution of thanks to the outgoing Master for "his devoted attention to the patients and to the interests of the charity." During Dr. Tweedy's time at the Rotunda many improvements have been carried out. The lying-in accommodation has been increased; rooms for women students have been provided; a residence wing for nurses has been built, giving room for additional pupil nurses; isolation rooms have been provided; and electric lighting has been introduced. The work of the hospital has largely increased, the maternity patients being more numerous by 500 a year than they were seven years ago. At the same time, in points of technique Dr. Tweedy has kept abreast with modern progress, and his last year in office has the distinction of being the year of lowest morbidity in the history of the hospital. Dr. Tweedy leaves the Rotunda to resume the duties of gynæcologist to Dr. Steevens' Hospital. Dr. Henry Jellett, who last year was elected King's professor of midwifery in the School of Physic, and now succeeds Dr. Tweedy, like his predecessor, possesses indefatigable energy, and the reputation of the hospital is sure to be maintained in his hands.

Notification of Deaths of Persons over 70.

District registrars, who in Ireland are mostly dispensary medical officers, have the duty of furnishing each week to the pensions officers the names of all persons whose deaths at ages over 70 have been registered. For these returns the Lords of the Treasury sanction a fee per name of 2*d*. Some time ago the Irish Medical Association protested against the inadequacy of the fee, but without result. At a recent meeting of the Council of the Association a suggestion was made that a list of names and addresses of Old Age Pensioners in each district should be periodically sent to the registrars, so that when the death of any person on this list is registered the registrar shall furnish a certified copy of the entry to the pensions officer, as is done in the case of navy or army pensioners. If this method were adopted the statutory fee of 2*s*. 7*d*. would be paid for each certificate.

Women Inspectors of Lunatics.

Last week the Blackrock urban council, on the movement of Lady Dockrell, passed the following strong resolutions demanding the appointment of women inspectors of lunatics and women members of asylum committees:—

(1) Having regard to the fact that nearly half the lunatics in Ireland are females, the Government be asked to appoint a lady inspector to visit the female lunatics in Ireland; (2) that having regard to the large number of female lunatics and to the increasing expenditure for the upkeep of the asylums and also for the maintenance of the insane, the Government be asked to make it compulsory that at least one member of every asylum committee in Ireland should be a woman.

Retirement of Sir John Fagan.

Sir John Fagan has retired from the offices of Inspector of Industrial Schools and Member of the General Prisons Board, Ireland. The former post he has held since 1897; to the latter he was appointed a few years ago on the retirement of Sir Stewart Woodhouse. In his earlier days he practised as a surgeon in Belfast. He received the honour of knighthood a few months ago. Surgeon-Colonel Edgar Flinn, medical inspector of the Irish Local Government Board, has been appointed to succeed Sir John Fagan in both capacities.

Health of Belfast.

From a report presented by the medical officer of health at the monthly meeting of the city council held on Nov. 1st, it appears that 121 cases of infectious disease were notified during the month ended Oct. 15th, as compared with 73 in the preceding four weeks, and 99 in the corresponding period of 1909. The increase is due to scarlet fever and diphtheria, of which 68 and 26 were notified respectively as compared with 33 and 11 in the previous month, and 45 and 10 in the corresponding period of 1909. No deaths had occurred from scarlet fever and only two from diphtheria. At present the resources of Purdysburn fever hospital are overstrained, and the health committee on Nov. 1st, at a special meeting, resolved to ask the board of guardians to receive surplus patients. The present accommodation at Purdysburn fever hospital is for 168 patients (they have now 159 in the wards); the proposed extension will take a considerable time to carry into effect and it provides for 268 patients, but, as pointed out by the chairman of the public health committee, they needed (on the principle of one bed for every 1000 of the population) 400 beds. This is precisely what those who gave evidence at the

Belfast Health Commission showed, and it is satisfactory to find that the city council now admit its correctness.

The Queen's University of Belfast.

The following interesting statistics give the total entries in session 1909–10, the first since the foundation of the University. In the faculty of medicine there were 279, of whom 9 were women; in the faculty of arts, 198, of whom 89 were women; in the faculty of science, 120, of whom 25 were women; and in the faculty of law, 11, all men. There were 12 non-matriculated students, 9 of whom were women and 3 men. The total number of students in session 1909–10 was therefore 618.

The King Edward Memorial in Belfast.

The subscriptions to the King Edward Memorial, which is to take the form of an additional block to the Royal Victoria Hospital, now amount to £14,018 10*s.* 6*d.*

University College, Cork: the Conferring of Degrees and the Behaviour of the Students.

On Nov. 3rd the degree Congregation of University College, Cork, assembled in the examination hall of the College. A number of friends of the students, among whom were many ladies, occupied the body of the hall, and the galleries were crowded by the undergraduates. Some of these young gentlemen showed their absolute ignorance of manners. Beginning by throwing down paper darts, they passed to lumps of sugar and thence to pieces of stale herring. One of the lady students, when approaching the platform to have a degree conferred on her, narrowly escaped being struck by such a disgusting missile, which fell on the leg of one of the professors. When the students subject their own friends to such treatment discredit falls upon them for their want of the ordinary sense of hospitality. Cordial relations have heretofore subsisted between the professors at Cork and the students, and the latter have displayed exemplary conduct and bearing. It is pleasing, therefore, to say that the missile-throwing was confined to the comparatively few of the great number of students present. Several degrees in arts and other faculties were conferred by the President, Dr. B. C. A. Windle, as Pro-Vice-Chancellor of the University. The degrees of M.B., B.Ch., B.A.O. were conferred on three students of the College. One of the three obtained first-class honours and another second-class honours. Dr. John Joseph Kearney, medical officer of the Rosscarbery Dispensary district, a former distinguished student of the Cork College, got his M.B. and B.Ch. degrees at the Royal University three years ago. Last spring the National University conferred on him the degree of M.D. with first-class honours, and on the strong recommendation of the Board of Examiners owing to the excellence of his answering awarded him a gold medal. On this occasion the Diploma of Public Health was conferred on him, Dr. Kearney having won first-class honours.

Nov. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Sciatica.

AT a meeting of the Société Médicale des Hôpitaux held on Oct. 14th M. Ramond, M. Deffins, and M. Pinchon said that in the treatment of 65 cases of primary sciatica they used one or other of the following methods: injection of artificial serum or solution of a magnesian salt in the vicinity of the nerve, epidural injection of cocaine, injection of air filtered through cotton wool, and *siphonage*. These were, in their opinion, the most active measures available for the purpose. The injection of air often gave excellent results in comparison with the effects produced by the other injections, and on account of its simplicity it deserved a good place on the list of therapeutic procedures. It was impossible to say which was the best form of treatment, because a case of sciatica which derived no benefit from injections in the vicinity of the nerve might improve or might even disappear entirely after injections of sterilised air or the epidural injections already mentioned. In the treatment of obstinate sciatica it was therefore advisable to make successive trials of these various methods.

Bullet Wounds of the Spleen.

Several cases of wounds of the spleen inflicted by revolver bullets were recently communicated to the Surgical Society by M. Guibé, who in operating on the patients was guided not by the signs of hæmorrhage but by the contraction of the abdominal wall. M. Auvray, who had been requested to submit a report on these cases, said that he had found 95 recorded instances of wounds of the spleen. The principal point of interest was the choice of the operation to be performed. When the wounds had been inflicted with a knife the majority of the operators considered that the transdiaphragmatic route was the best, leading as it did directly to the convex surface of the spleen. The circumstances were by no means the same for bullet wounds of the spleen, because these might be accompanied by serious lesions in distant parts of the abdomen, and for such wounds the operation recommended was laparotomy, either median, lateral, or transverse, always keeping in mind the possibility of thoracotomy being afterwards necessary. M. Auvray, however, considered that a surgeon ought to be very cautious in undertaking extensive secondary operations on the thorax because they rendered the prognosis less favourable. Splenectomy was generally performed, but under certain conditions it was better to attempt preservation of the viscus with suturing. The mortality was very high—55 deaths among the 95 recorded cases. The facts observed by M. Guibé raised the question of producing artificial pneumothorax, an operation which most surgeons considered to be not very serious. Wounds in the diaphragm ought always to be sutured, for if this was omitted secondary hernia would occur; the experiments of M. Ripetto had clearly shown that such sutures held well, and that a cicatrix was formed.

Fatal Accident to Dr. Armand Trousseau.

Dr. Armand Trousseau, grandson of the celebrated professor of clinical medicine, has recently lost his life in a motor-car accident. Through the overturning of the vehicle which he was driving his skull was fractured and he was killed on the spot. Having been admitted *interne* in 1878, he soon applied himself to ophthalmic work. Eventually he became medical attendant to the blind asylum known as Quinze-Vingts, and was subsequently selected as director of the Rothschild institutions for the blind.

Sleeping Sickness.

At the October meeting of the Société de Pathologie Exotique two communications on the subject of sleeping sickness were read. The first was by M. Martin and M. Ringelbach on the preventive measures against the disease undertaken at Brazzaville and in the Congo district in 1909. Patients infected with trypanosoma received treatment at the Pasteur Institute in Brazzaville. A system of inspection in connexion with the disease was established, natives who travelled from place to place had to obtain sanitary passports, and none were employed on military service or as porters until they had been specially examined. In the second communication M. and Mme. Yakimoff recorded their observations on the action of Ehrlich's new remedy "606" on 14 rats infected with Trypanosoma gambiense. From 1 to 14 days after the appearance of trypanosomata in their blood they received injections of 0·15 gramme of "606" per kilogramme of the animal's weight, after which they were kept under observation for periods varying from 49 to 80 days. The parasites disappeared from the blood in from 45 to 62 minutes after the injections. Animals which received simultaneous injections of "606" and trypanosoma virus did not become infected.

Nov. 7th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Jubilee of the Berlin Medical Society.

THE Berlin Medical Society celebrated its fiftieth anniversary by a special meeting on Oct. 26th. Professor Senator, the President, gave a short history of the society, which was formed by the amalgamation of two associations designated respectively the Society for Scientific Medicine and the Society of Berlin Medical Men. During the early years of the new society it received communications on miscellaneous

professional questions, as well as on subjects connected with medical science, but in course of time it confined itself to scientific subjects, the professional matters being left to other newly-formed associations of practitioners. Many important discoveries were first made public by papers read before the Berlin Medical Society; it is also the largest medical society in Germany, the number of members being about 1600. The rector of the University, Professor Rubner, the dean of the Medical Faculty, Professor Ziehen, and representatives of other medical societies then delivered short congratulatory speeches on the jubilee occasion. Professor Orth, Vice-President, announced that the society had admitted a number of prominent medical men in Germany and abroad to the honorary membership, and that Professor Senator had been made honorary President. The honorary members included Dr. Boas and Dr. Kessler, the only survivors of the original founders of the society, the other German honorary members being Professor Waldeyer, Professor Naunyn, Professor Röntgen, and the chief of the Army Medical Corps, Dr. von Schjerning. The foreign honorary members included Professor Exner and Professor Fuchs of Vienna, Lord Lister, Professor Laveran of Paris, Professor Lépine of Lyons, Professor Golgi of Rome, Professor Murri of Bologna, Professor Jacoby of New York, Professor Keen of Philadelphia, Professor Armauer Hansen of Christiania, Professor Retzius of Stockholm, Professor Korany of Budapest, Professor Pawlow of St. Petersburg, Professor Ramon y Cajal of Madrid, Professor Salomonsen of Copenhagen, and Professor Kitasato of Tokio. Professor Landau, Vice-President, made a statement relative to the Virchow Haus, the future home of the society, and announced that Professor Virchow's widow had bequeathed to the society his valuable collection of specimens which were to be placed in the new premises and would form a Virchow Museum. In the evening the members of the society and their guests were entertained at a "Commers" in the Philharmonic.

Rabies in Germany.

406 persons have been officially recorded as having been bitten by rabid animals in Prussia during the year 1909. Of these patients 68·2 per cent. were men and 31·8 per cent. were women. The majority of the cases happened in the districts adjoining the Russian frontier, whilst no case at all happened in the provinces of Westphalia, Hanover, and Saxony. The animals inflicting the injuries are described as 190 dogs, 5 cats, 3 horses, and 4 other domesticated animals. In 19 cases the patient contracted the disease from other persons. Of the total number of persons bitten 374 (92·1 per cent.) received Pasteur treatment—203 in the Institution for Infectious Diseases in Berlin and 171 in the Hygienic Institute at Breslau. There were 10 deaths in all, 8 of the deceased having been treated by Pasteur's method, so that among 374 persons treated in this way 8 (2·13 per cent.) died, and among 32 persons not treated in this way 2 (6·25 per cent.) died.

A New Dietetic Preparation.

Professor von Noorden of Vienna, writing to the *Berliner Klinische Wochenschrift*, has given a very favourable description of a new dietetic preparation termed "riba," consisting almost entirely of albumins and albumose with only a small quantity of extractives such as purin bodies and kreatinin. When mixed with three parts of water it has a brown colour, a smell of glue, and a rather bitter taste, which disappears after the preparation has been added to some ordinary article of food having a more or less fluid consistence. Clinical observations showed that from 60 to 100 grammes could be administered daily without causing digestive troubles, although many of the patients suffered from diseases of the stomach, constipation, chlorotic dyspepsia, and similar conditions. That the preparation was very readily absorbed was proved by the fact that the elimination of nitrogen in the fæces was only very little increased by the administration of the substance. One of the experiments made for this purpose was as follows. A patient was given a nutritive enema consisting of 300 grammes of a "riba" solution containing 14·5 grammes of nitrogen. Three hours later the rectum was washed out, with the result that only 1·85 grammes of nitrogen was present in the fluid, so that 12·65 grammes had been absorbed within three hours. "Riba" should not be given in milk or bouillon because of its bitter taste which disappears when it is mixed with thick soup, such as a purée of potatoes or carrots, or with gruel made with oatmeal or barley. The indications for the use of "riba" are the same as for other albuminous preparations. In the uric diathesis it is as harmless as vegetable albumin because it contains only a very small quantity of purin bodies.

Oct. 31st.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Insanitary State of Southern Italy.

THE speech of the Minister of the Interior, Signor Calissano, at Alba last week has made a very favourable impression on medical circles in Italy, showing as it does an unusual interest in and grasp of sanitary problems on the part of an Italian politician. The greater part of Signor Calissano's discourse was devoted to those sanitary questions which are indeed of outstanding importance for Italy at the present moment and especially for the southern portion of the peninsula, and which have been raised by the recent outbreak of cholera and by the scarcity and even total lack in many places of a sufficient supply of potable water. In regard to cholera, after a brief reference to its steady advance during the last five years through central and eastern Europe and to the geographical position of Italy, interposed like a long barrier between Europe and the East, and in consequence peculiarly exposed to the danger of invasion by Asiatic diseases, the Minister discussed the origin of the outbreak in Italy, pointing out the difficulty or rather the impossibility of ascertaining the precise mode of its entrance, not only on account of the well-known fact that the germ may be carried by persons apparently in good health, but also because of the grave error committed by certain medical men of Bari, under whose observation the first cases came, in failing to recognise the disease as cholera. Before this blunder was detected by Professor Gosio, the able chief of the bacteriological laboratory of Rome, who was sent expressly to investigate the so-called gastro-enteritis on the spot, many cases had already occurred, and it was no longer practicable to trace their original source. The nature of the disease once definitely recognised, the action of the sanitary authorities was prompt and effective both in dealing with the epidemic at the various points at which it had appeared and in adopting protective measures against its possible outbreak at any other centre throughout the kingdom. The result has been eminently satisfactory, for if not yet entirely extinguished the epidemic in the course of a few weeks has all but died out, only a few sporadic cases occurring here and there, which in their turn are promptly isolated so as to prevent effectually any further spread of the malady. This happy result has been achieved in the face of the greatest difficulties, caused both by the attitude towards repressive measures taken up by the ignorant and superstitious peasantry and by the fearfully insanitary conditions in which these poor people exist. In the Puglie the population, composed chiefly of peasants, live either in dwellings underground or shut up in hovels without air or light, huddled together in crowds in a state of indescribable misery and abandonment, their water-supply drawn from wells contaminated with every filth, and all of them poverty stricken, with no resources to fall back upon in such a crisis, and unable to obtain work because those who might employ them are likewise themselves destitute. The local communes, at the end of their resources and lacking the means of carrying out the necessary sanitary measures, are quite unable to cope with the situation, and, worst of all, the public spirit in many places is so demoralised that it gives way to panic, the terror-stricken people taking to flight, concealing the suspected cases and deaths, and reviving all the old mediæval traditions of poisoning and wilful spread of the disease by the doctors. In these circumstances it is not surprising that riots, and even loss of life, have in some instances been the outcome of attempts by the sanitary authorities to enforce isolation of the infected and of suspected cases. But by the exercise of courage, tact, and patience these difficulties have been nearly always peacefully overcome, a fact which reflects the highest credit upon the officials to whom these trying duties have been entrusted, and their final victory

seems now well in sight. Signor Calissano contrasts the present epidemic, in which the number of victims has not amounted to more than 1000, with that of 1893, when there were over 3000; that of 1887, when there were over 8000; and that of 1884–86, when the grand total was well over 50,000, and thinks that considering the duration of the outbreak, the wide extent of country affected, and the invasion of towns and cities where the contagion might easily have spread, there is reason to be proud of the victory which has been already gained. At the same time, he deprecates any relaxation of the precautions now being taken, bearing in mind the possibility of a recrudescence of the disease in the spring and the enormous loss such an outbreak would inflict on the whole country, more particularly by compromising the success of the great patriotic celebrations at Turin and Rome in 1911, and of the two exhibitions of industry and art to be held in these cities and in which the whole world is taking part. As a result of the visit paid by Ministers to Naples and the other infected districts of the south in connexion with the epidemic, the Government have realised the necessity of a great reform in the organisation of the sanitary services, including the institution of courses of lectures on the theory and practice of epidemiology, with special attention to exotic diseases and to the technique of disinfection; of schools for nurses of both sexes; and of a different system in the creation of local sanitary offices, or at least of a more rigorous method in the selection of the local sanitary officials. A project of law has also been prepared providing for the filling up of the attenuated ranks of the present sanitary *personnel* and for the supply of more adequate means for the hygienic defence of the country. Turning to the question of the water-supply, Signor Calissano announced that the Government were preparing, or had already prepared, various projects dealing with the problem, and especially one of a general kind enacting that all communes, even to their smallest subdivisions, shall be provided with potable water. He explained how under the present wholly inadequate system there are 17 millions of the inhabitants still without such a supply, and said that the Government are determined, by facilitating the purchase of pure sources and by the construction of aqueducts, to make good this deficiency, so that everyone, with the exception only of those living scattered in remote country districts where the expense would be prohibitive, may be able to obtain pure drinking water. For this purpose it will be necessary to raise funds by special imposts which will be termed hygienic taxes. Since the above speech was delivered the epidemic of cholera has meanwhile greatly diminished, Naples in particular, where its spread was most dreaded, having now had no cases for several days. The measures taken in Rome for dealing with the few imported cases which were promptly isolated there have been entirely successful, no instance having occurred of a spread of the infection from any of them.

Nov. 5th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the New Rockefeller Hospital.

THE opening on Oct. 16th of the new Rockefeller Hospital was attended by some 2000 persons, among whom were to be noticed many of the most internationally known of America's physicians. This hospital differs from all others in that while it will at all times be a special hospital, devoting itself entirely to the care and investigation of certain diseases and opening its doors to subjects of those diseases alone, this specialisation will not be permanently in one direction but will be subject to change at the discretion of the Board of Scientific Directors, in accordance with the variations in the nature of the problems that from time to time most urgently call for solution. Three or four diseases are to be selected for study and only subjects of these diseases will be received to benefit by the care of the institute and hospital, which will be given gratuitously to the full extent of its capacity. All the most modern resources that the ingenuity of scientific man can devise will be brought to the aid of both patient and science. At the same time, each one of those in attendance will be not only artist but scientist. While exercising the highest that is humanly attainable at the time in the direction of cure, they will devote their entire time and energies, already trained in research, to solving the problems which yet remain in the particular diseases for the time being under investigation. No private practice, not even the diffusion of interest that inevitably takes place in a general hospital, will be there to weaken the concentration of concerted observation from different viewpoints on the one subject in all its bearings. The investigation into the particular disease will go on simultaneously and coöperatively by both laboratory and clinical methods of research. Here, for the first time in its history, medical scientific research will be unified and complete, with no further ground for impeachment by the laboratory man of the inaccuracy and inexactness of the clinician's method or counter assertions by the clinician that the laboratory man forgets that he is dealing with a living person, not with a test-tube. Here the laboratory and the clinic will work side by side under the care of men each equally familiar with the working of both methods and specialising their duties, if at all, merely for convenience, not from necessity. The evolution of the Rockefeller Institute exemplifies probably the sanest conception of the way progress in medicine lies that the world has ever seen. Mr. Rockefeller took counsel with medical scientists of the first rank in whom he had full confidence as to what problems in medicine most immediately called for solution, and having convinced himself of the soundness of their views gave them the sum of $200,000—this was in 1901—to deal with and carefully watched what use they made of it. Being satisfied with the practical utility of their results, in 1902 he gave a further sum of $1,000,000 to provide the necessary buildings and equipment for the more centralised and controllable continuance of the work, and to bear the running expenses for a few years. This gift was further amplified in 1907 by the munificent endowment of $2,600,000 for the institute. In the meantime it had been demonstrated to Mr. Rockefeller's keen sagacity that a hospital to afford unfettered means for appraising clinically the results arrived at by laboratory methods was essential, if those results were to be fairly tested by competent men familiar with their method of working. The hospital thus initiated was opened on Oct. 16th, and at the same time Mr. Rockefeller added a further endowment fund of $3,820,000. The entire estate and income of the institute, including the new hospital, was on that day formally taken possession of by a board of trustees, consisting of John D. Rockefeller, jun., Frederick T. Gates, William H. Welch, Starr J. Murphy, and Simon Flexner, thus converting the institute from a private concern to a public trust. To quote from the statement issued by the trustees, they "hold the entire income at the disposal and under the full control of the Board of Scientific Directors, which is constituted as follows: Dr. William H. Welch, of Baltimore, president; Dr. T. Mitchell Prudden, of New York, Dr. L. Emmett Holt, of New York, secretary and treasurer; Dr. Christian A. Herter, of New York, Dr. Simon Flexner, of New York, director of laboratories; Dr. Herman M. Biggs, of New York, and Dr. Theobald Smith, of Boston." It would be impossible to conceive of a stronger or more workable board. The medical staff consists of Dr. Rufus L. Cole, director; Dr. Christian A. Herter, physician to the hospital; Dr. G. C. Robinson, resident physician; and Dr. Draper, Dr. Marks, Dr. Swift, and Dr. Peabody, internes, each one of whom has had special training in investigation work. The hospital is neither a separate institution nor an addendum to the Rockefeller Institute; it forms an integral part of the institute itself, with the laboratory of which it is in actual contiguity, being connected with it by the isolation building, a two-storey structure consisting of a series of rooms separated from one another only by glass partitions, thus forming a thoroughly germ-proof series, yet capable of control by a single night nurse. The ventilation is specially provided for by a straight copper tube from each room carried through the roof, and fitted at the bottom with an aspirating coil and an ejector, so that the cleansing with live steam is a simple matter in the hands of the attendant. To describe the laboratories, workrooms, living rooms, patients' rooms, dressing rooms, operating rooms, kitchens, offices, &c., would take up too much space. Suffice it to say that the crowd of competent critics who thronged to the opening seemed to be agreed that the hospital represents the highest effectiveness

at present attainable, from the view-point alike of patient, physician, and investigator. The hospital was opened for the reception of 70 patients on Oct. 20th. The diseases first selected for special study are infantile paralysis, because of its appearance in epidemic and malignant form, and pneumonia and heart diseases, which according to recent statistics show the most marked increase in the death-rate.

Alvarenga Prize of the College of Physicians of Philadelphia.

The Alvarenga prize of the College of Physicians of Philadelphia for 1910 has been awarded to Dr. M. Katzenstein of Berlin, Germany, for an essay entitled "The Formation of an Arterial Collateral Circulation in the Kidney." The College announces that the next award of the prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14th, 1911, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and must be received by the secretary of the college on or before May 1st, 1911. They must be sent without signature, marked with a motto and accompanied by a sealed envelope having on its outside the motto and within the name and address of the author.

Nov. 1st.

Medical News.

UNIVERSITY OF BRISTOL.—At the first congregation for the conferring of degrees the following graduates of the Faculty of Medicine were admitted. It will be noticed that many of these were past students of University College, Bristol, who had already graduated in another University, and were admitted to the "ad eundem" degree:

Bachelor in Medicine and Bachelor in Surgery.—William Marmaduke Bergin, M.B., B.S. Lond., Charles William James Brasher, Arthur Lancelot Flemming, William Wilfrid King, Leonard Augustus Moore, Leonard Newsom Morris, Frederick Charles Nichols, Thomasina Georgina Prosser, M.B., B.S. Durh., William Stuart Vernon Stock, M.B., B.S. Lond., John William Taylor, and Andrew John Metford Wright, M.B., B.S. Lond.

Bachelor in Medicine.—Philip Graham Stock, M.R.C.S., L.R.C.P., D.P.H., and Vivian Bartley Green-Armytage (*in absentiâ*).

Master of Surgery.—Clifford Arthur Moore, M.S. Lond.

Doctor of Medicine.—Henry Devine, M.D. Lond., Arthur Hill Joseph, M.D. Lond., and William Barrett Roue, M.D. Durh.

Doctor of Medicine and Bachelor of Surgery.—Professor Walter Carless Swayne, M.D., B.S. Lond.

Honorary Degree of Doctor of Science.—Professor Conwy Lloyd Morgan, LL.D. (*honoris causâ*), Aberdeen, F.R.S.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. Giovanni Razzaboni has been recognised as *privat docent* of External Pathology.—*Bonn:* Dr. Otto Dragendorff has been recognised as *privat docent* of Anatomy, and Dr. Wassermeyer of Kiel as *privat docent* of Psychiatry.—*Buffalo:* Dr. Francis C. Goldsborough of Baltimore has been appointed to the chair of Midwifery in succession to Dr. Matthew D Mann resigned.—*Cagliari:* Dr. Efisio Orrù has been recognised as *privat docent* of Anatomy.—*Florence:* Dr. Ettore Levi has been recognised as *privat-docent* of Neurology.—*Greifswald:* Dr. F. A. König of Altona has been appointed Professor of Clinical Surgery in succession to Dr. E. Payr.—*Halle:* Dr. Ernst Laqueur of Königsberg has been recognised as *privat-docent* of Physiology, and Dr. Josef Igersheimer as *privat-docent* of Ophthalmology.—*Kharkoff:* Dr. B. G. Priêvalski has been appointed Professor of Operative Medicine and Topographic Anatomy.—*Marburg:* Dr. Wenckebach of Groningen has been invited to succeed Professor Brauer, and Dr. Wilhelm Zangemeister has been offered the chair of Midwifery, with charge of the Female Clinic, in succession to Dr. Stoeckel, who goes to Kiel.—*Munich:* Dr E. Edens has been recognised as *privat-docent* of Medicine.—*Naples:* Dr. M. De Vico has been recognised as *privat docent* of Medical Diagnosis, and Dr. V. Marcopi as *privat-docent* of External Pathology.—*Parma:* Dr. Carlo Ferrai, Professor in Modena, has been appointed to the chair of Forensic Medicine.—*Pavia:* Dr. U. Carpi and Dr. E. Morelli have been recognised as *privat-docenten* of Medical Pathology, Dr. R. Pandolfini as *privat-docent* of Surgical Pathology, and Dr. G. Ciuffo as *privat-docent* of Dermatology.—*Prague (German University):* Dr. Hans Rotky has been recognised as *privat-docent* of Medicine, and Dr. Robert Salus as *privat-docent* of the Special Pathology and Therapeutics of the Eye.—*Turin:* Dr. L. Borelli and Dr. P. F. Tuccòla have been recognised as *privat-docenten* of Medical Pathology, Dr. I. Valobra as *privat-docent* of Neurology, Dr. Giacinto Mosso as *privat-docent* of Ophthalmology, and Dr. A. Nieddu as *privat-docent* of Otology and Laryngology.—*Warsaw:* Dr. G. P. Sakharoff of Kazan has been appointed Professor of Medical Chemistry.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon, Sir James Crichton-Browne, Treasurer and Vice-President, in the chair, when Professor H. S. Hele-Shaw, F.R.S., Dr. A. Latham, and Dr. StClair Thomson were elected members among others.

THE LE TOUQUET GOLFING TOURNAMENT FOR THE PROFESSIONS.—The Le Touquet Golfing Tournament for the Professions of the Church, Navy, Army, Medicine, Law, and so on, will be held at Le Touquet, near Boulogne, during the week-end Dec. 10th to 12th, 1910. Play will be as follows: 18 holes Match Play *v.* Bogey, under handicap. Class I., handicaps 12 and under. Class II., handicaps over 12. Players can take out as many cards as they wish. Prizes will be given by the Le Touquet Golf Club. Intending competitors should send names and addresses as soon as possible to L. Eliot Creasy, M.R.C.S., L.R.C.P., 36, Weymouth-street, London, W., when information concerning vouchers for cheap week-end tickets will be forwarded.

ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.—The annual meeting of this association was held at the Hotel Cecil, London, on Oct. 28th. Mr. J. C. Bradshaw (Liverpool), the President, occupied the chair. The minutes of the last annual meeting were read and confirmed. A long discussion followed relating to the general business and financial affairs of the association. A proposition was carried with enthusiasm electing Dr. A. E. Cope (London) to be President for the ensuing year. The retiring council, with an addition in the place of one resignation, were re-elected. In the evening the annual dinner was held at the Hotel Cecil. Among the guests were Dr. A. P. Hillier, M.P., Dr. R. A. Farrar (Medical Inspector, Local Government Board), Mr. W. B. Parsons (THE LANCET), and Mr. G. S. Elliston (*Medical Officer*). Dr. Hillier, in responding to the toast of "The Guests," which was proposed in a humorous speech by Mr. J. Foster Palmer (London), expressed great pleasure at meeting so many of his professional brethren who were engaged in carrying out that branch of practice which dealt with the application of preventive medicine. When a future historian came to deal with our age he believed it would be recorded that nothing more markedly distinguished the period than the wonderful work which began with Jenner and which had been carried on by Pasteur, Lister, and Koch to such an extent as to have conferred upon mankind at large probably a greater aggregate of good results than the world has ever seen. As that splendid work expanded they still had sceptics to deal with. They might, however, console themselves that people were still living who believed the world to be flat and that mankind had benefited nothing from experiments performed upon lower animals. These people might be placed in the same category as those who believed vaccination was worthless. When he was out in South Africa he had the opportunity of witnessing the effects of an epidemic of small-pox on an unvaccinated community. Many real conscientious objectors existed there among the people, who, being Mahommedan by faith, had as an article of their belief the notion that it was an insult to the Deity to withstand disease. Before the epidemic was over many of these came to be vaccinated as a result of their observations among the vaccinated. Their objections might have been excusable, but for the life of him he could never understand how the conscience of the objector in this country could enter into the question. Vaccination had been since that time carried out in South Africa with excellent results. The evidence regarding the protective value of vaccination was so overwhelming that he could not understand how any sensible man could question its efficacy. He believed that small-pox could never be successfully combated by simply vaccinating the contacts. If the bulk of the profession were of that opinion he suggested the time had come when the leading men of the profession should meet to

make a public protest. Nothing would carry more weight with the House of Commons than an opinion judiciously expressed by the leaders of the profession. Other toasts included "The Association of Public Vaccinators of England and Wales," proposed by the President (Dr. Cope) and responded to by Mr. Bradshaw, and "Public Health and Poor-law," proposed by Dr. A. Drury (Halifax), and responded to by Sir H. W. Newton (Newcastle-on-Tyne).

ROYAL SOCIETY OF ARTS.—The programme for the 157th session of the Royal Society of Arts is being issued to the members. The following papers are among those announced: Sir Henry H. Cunynghame, K.C.B., Detecting Fire-damp; Dr. Vaughan Cornish, the Panama Canal; Mr. A. Montgomery, Mining in Western Australia. On the four Mondays before Christmas Mr. C. R. Darling is to give a course of Cantor lectures on Industrial Pyrometry. There is a full list of papers and lectures for the part of the session after Christmas.

SOUTHWARK SLUM CLEARANCE SCHEME.—The London County Council on Nov. 8th decided, on representations by the medical officers of health of Southwark and Bermondsey, to spend £387,000 on a clearance scheme in the Tabard-street area, off the Borough High-street, and two smaller slums in the vicinity. It is proposed to re-house half the displaced population in block dwellings, to lay out five acres of the Tabard-street area as an open space, and to use the remaining three acres of the site for commercial purposes. The Housing of the Working Classes Committee stated that the area was so badly planned and the houses in such a deplorable state that only a complete clearance would be of any use. The following particulars with regard to the death-rate are significant:—Deaths from all causes, 1904–08: Tabard-street area, 36·8 per 1000; Southwark, 18·2; and London generally, 14·9. Phthisis death-rate: Tabard-street, 3·83; Southwark, 2·09; and London, 1·44. The principal endemic diseases: Tabard-street, 6·07; Southwark, 2·29; and London, 1·71.

THE FEEDING OF NURSES.—Under the auspices of the National Food Reform Association a conference of hospital matrons was held in Caxton Hall, London, on Nov. 5th, to discuss the question of nurses' food in hospitals and similar institutions. Miss Rosalind Paget presided, and among the speakers were Miss Musson, matron of the Birmingham General Hospital, Miss Cox Davies, matron of the Royal Free Hospital, and Miss Barton, matron of the Chelsea Infirmary. The general complaint, as expressed by many representatives, seemed to be the monotony of hospital fare, and many suggestions were made as to the practicability of altering this by adopting some of the French *réchauffé* dishes, and the German methods of cooking vegetables. The chief difficulties apparently lay in the extra thought in planning which would be thrown upon the caterer and upon the intelligence of the cook. But all were agreed that if the result is to be greater vigour of mind and body in the nurses, who are, after all, responsible for carrying out the medical treatment of the patients, then it is certainly worth while attempting to overcome these difficulties. One speaker said she thought the food was not of so much importance as the time taken for meals. In many institutions the nurses have only half an hour for dinner, out of which at least five minutes is taken up in going to and from the wards and dining-room.

THE LONDON COUNTY COUNCIL AND THE DEPARTMENTAL COMMITTEE ON CORONERS.—The General Purposes Committee submitted to the London County Council on Nov. 8th a long report in which were set forth the points of divergence between the recommendations of the Departmental Committee on Coroners and the resolutions in which, from time to time, the Council has expressed its views as to desirable amendments in the law. The General Purposes Committee thought that, subject to certain modifications, Sir William Collins's Coroners' Law and Death Certification (Amendment) Bill would be acceptable to the Council, and that the Government should be urged to give facilities for its passage during the autumn session. The Council, however, would do well to re-affirm its views on those points on which the Departmental Committee came to a different conclusion. These were that coroners should be paid by salary and be required to devote their whole time to the duties; the number of jurymen should be not less than six nor more than 11, and should be summoned strictly by rota; the view of the body by the jury should be dispensed with, except in cases in which the coroner and a majority of the jury thought it necessary; and that no fees for giving evidence or making post-mortem examinations should be paid to medical officers employed in rate-aided institutions.

DONATIONS AND BEQUESTS.—Prince Alexander of Teck has now received nearly £5000 for the Prince Francis of Teck Memorial Fund in aid of the Middlesex Hospital. This sum includes donations of 100 guineas from the King and the Queen, and a magnificent gift of £1000 from Mr. J. Bland-Sutton.—An anonymous gift of £1000 has been made towards the erection of new buildings for the Nottingham and Midland Eye Infirmary.—An anonymous gift of £5000 has been made to the governors of the Victoria Infirmary, Glasgow, for the purpose of building and equipping a clinical research laboratory.—The Manchester Royal Infirmary has received from Mrs. J. E. Platt a cheque for £1000 for the purpose of endowing a bed in that institution in memory of her late husband, who for many years was an honorary surgeon to the Royal Infirmary.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS: PRESENTATION TO THE LATE HONORARY SECRETARY.—The annual dinner of the Incorporated Association of Certifying Factory Surgeons was held at the Queen's Hotel, Manchester, on Nov. 4th. Mr. W. F. Dearden of Manchester, who has been honorary secretary of the association for the last 11 years, was elected President, and took the chair at the function, which was well attended by members from all parts of the country. After "The King" had been duly given and responded to, Mr. A. A. Haworth, M.P., responding to the toast of "The Houses of Parliament," proposed by Dr. J. Brassey Brierley, said that Parliament could not legislate one inch in front of public opinion. The experience of the past fully supported this view. In their efforts they must carry the people with them. The factory legislation of the past and the legislation now proposed, which would be passed into law, would be looked upon in times to come as one of the factors in the great march of civilisation and progress. Mr. T. Fort then made a presentation to Mr. Dearden on behalf of the association. It consisted of a silver tray, tea service, entrée dishes, and a gold bracelet for Mrs. Dearden. Mr. Fort spoke of the work of Mr. Dearden in promoting health in the factory and among school children, remarking that he was one of the leading authorities on industrial disease, and had contributed valuable papers to various medical and scientific associations at home and abroad. Mr. Dearden had also been one of the prime movers in securing the charter of incorporation. Mr. Dearden, in responding, said that their greatest triumph had been achieved when they succeeded in securing the retention of the old statutory obligation requiring the investigation into the causation of so-called preventable factory accidents by the certifying surgeon, and this was principally owing to the way in which every individual member used his efforts to convert any Member of Parliament with whom he happened to be acquainted. The British Medical Association and Sir Victor Horsley were also entitled to a share of the credit. The modern and only successful method by which a body of men engaged in the same calling could hope to improve their common condition was by association, and he had striven hard to convince certifying surgeons of this principle, which stood for uniformity of views and uniformity of action. The departmental returns for 1900, at the beginning of which year he took office, showed that 1882 certificates had been refused for physical incapacity; each year these figures had gradually improved until at the end of 1909 they had gone up to 7738. The association had convinced the authorities of the tremendous advantage to juvenile labour of legalising the regulation of the nature of employment to the physical capacity of the applicant by authorising the certifying surgeon to affix conditions to his certificate, and it was members of the association who were responsible for the 5775 conditional certificates granted last year. He concluded by speaking in terms of great praise of the work of Dr. T. M. Legge and Dr. E. L. Collis, the medical inspectors of factories attached to the Home Office. Sir William Bailey proposed the "Factory Department of the Home Office," and Professor G. R. Murray, in responding for

"The Visitors," made the suggestion that any wealthy employer who wished to devote a sum of money to a really good object could not do better than endow a research scholarship for the study of industrial disease.

Colonel Sir David Bruce's name should have been included in the list published last week of those who have joined the Organising Committee of the Seventeenth International Congress of Medicine.

Mr. Ernest Hook Buckell, who on Nov. 1st was elected for the first time a member of the Chichester city council, has been placed on the Commission of the Peace for the city.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the annual meeting of Fellows and Members of the Royal College of Surgeons of England, which is to be held at the College on Thursday next, Nov. 17th, the President will place before the meeting the report of the Council for the collegiate year ending August 1st, 1910. Mr. Joseph Smith, J.P., M.R.C.S., is to propose the following motion:—"That this twenty-sixth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council, which, as now constituted, does not represent the whole corporation, and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation." The President takes the chair at 3 o'clock.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.

Practical Physiology. Edited by M. S. Pembrey. Contributors:—A. P. Beddard, M.A., M.D., J. S. Edkins, M.A., M.B., Martin Flack, M.A., M.D., Leonard Hill, M.B., F.R.S., J. J. R. Macleod, M.B., M. S. Pembrey, M.A., M.D. Price 14s. net.

CROSBY, LOCKWOOD, AND SON, London.

Houses, Villas, Cottages, and Bungalows. For Britishers and Americans Abroad. By George Gordon Samson, Architect. Price 3s. 6d. net.

DOIN, OCTAVE, ET FILS, Paris.

Congrès International de Radiologie et d'Électricité. Bruxelles, 13, 14, et 15 Septembre, 1910. Notions Nouvelles Introduites en Médecine par l'Exploration Radiologique de l'Estomac. Rapport présenté par MM. le Dr. G. Leven et le Dr. Barret. Price not stated.

FISCHER, GUSTAV, Jena.

Die eitrigen Entzündungen des Eileiters. Histologische Untersuchungen von Dr. Herm. Schridde. Price M.7.

FUNK AND WAGNALLS COMPANY, New York and London.

The Care and Training of Children. By Le Grand Kerr, M.D. Price 3s. net.

HIRSCHWALD, AUGUST, Berlin.

Polyzythämie und Plethora. Von Prof. Dr. H. Senator, Geheimer Medizinalrat in Berlin. Price M.2.40.

Vorlesungen über Harnkrankheiten. Für Aerzte und Studierende. Von Dr. C. Posner. Price M.9.

KABITZSCH, CURT (A. STUBER'S VERLAG), Würzburg.

Taschenbuch der Therapie, mit besonderer Berücksichtigung der Therapie an den Berliner, Wiener u.a. deutschen Kliniken. Herausgegeben von Dr. M. T. Schnirer. Siebente vermehrte u. verbesserte Ausgabe. Price M.2.

KARGER, S., VERLAG VON, Berlin.

Die Psychopathischen Konstitutionen und ihre sociologische Bedeutung. Von Dr. med. Helenefriederike Stelzner. Price, paper, M.6; bound, M.7.20.

Die Paralysis agitans. Eine Monographie. Von Dr. Kurt Mendel. Price M.4.

Die mikroskopischen Untersuchungsmethoden des Auges. Von Dr. S. Seligmann. Zweite, gänzlich umgearbeitete und erweiterte Auflage. Price, paper, M.8; bound, M.9.20.

Oxypathie. Von Prof. Dr. Wilhelm Stoeltzner. Price M.3.

Der intraokulare Flüssigkeitsstrom in seinen Beziehungen zum biomechanischen Aufbau des Auges unter gesunden Verhältnissen, beim Glaukom und bei der Kurzsichtigkeit. Von Dr. J. Kuschel. Price M.7.

Jahrbuch für Kinderheilkunde und physische Erziehung. Unter Redaktion von O. Heubner, Th. Escherich, A. Czerny. 72. der dritten Folge 22 Band. Heft 4. Ausgegeben am 15 Oktober, 1910. Price not stated.

KLINKHARDT, DR. WERNER, VERLAG VON, Leipzig. BAILLIÈRE, TINDALL, AND COX, London. G. E. STECHERT AND CO., New York. SOCIETÀ EDITRICE LIBRARIA, Milano. "PRAKTICHESKAYA MEDITSINA," St. Petersburg.

Aus den Hamburger Staatskrankenhäusern. Pathologisch-anatomische Tafeln nach frischen Präparaten. Mit erläuterndem anatomisch-klinischem Text. Unter Mitwirkung von weiland Professor Dr. Alfred Kast. Weiterherausgegeben von Professor Dr. Eugen Fraenkel und Dr. Theodor Rumpel. Vollständig in 26 Lieferungen. Lieferungen XIII.-XXVI. Im Abbonnement 5 Mark p. Lieferung. Einzelne Tafeln, M.1.50. (Pathological Anatomy Plates. Reproduced from Fresh Preparations with Explanatory Anatomical and Clinical Text. English Translation by Francis C. Purser, M.D. Dub., F.R.C.P.I. With Preface by J. Lorrain Smith, M.D.)

LEHMANN, J. F., München.

Lehmann's Medizinische Handatlanten, Band XIII. Atlas und Grundriss der Verbandlehre für Studierende und Aerzte. Von Dr. Albert Hoffa. Nach des Verfassers Tod bearbeitet von Privatdozent Dr. Rudolf Grashey, München. Vierte, wesentlich vermehrte Auflage. Price, bound, M.10.

LONGMANS, GREEN, AND CO., London, New York, Calcutta, and Bombay.

Vaccine Therapy: its Administration, Value, and Limitations. A Discussion opened by Sir Almroth E. Wright, M.D., F.R.S. (From the Proceedings of the Royal Society of Medicine, 1910, Vol. III.) Price 4s. 6d. net.

MACMILLAN AND CO., LIMITED, London.

A System of Medicine. By Many Writers. Edited by Sir Clifford Allbutt, K.C.B., M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., and Humphry Davy Rolleston, M.A., M.D., F.R.C.P. Vol. VIII. Diseases of the Brain and Mental Diseases. Price 25s. net.

MALOINE, A., Paris.

La Désinfection à la Campagne. Organisation et Fonctionnement du Service Départemental de Désinfection en Seine-Inférieure. Par le Docteur Charles Ott et Martial Basilaire. Price not stated.

MARHOLD, CARL, Halle-a.-S.

Wesen und Behandlung der Achylia gastrica. Von Prof. A. Schüle. Price M.1.20.

NATIONAL PRINTING DEPARTMENT, Cairo.

Ministry of Finance, Egypt. Survey Department. The Archæological Survey of Nubia. Report for 1907-08. Vol. II.: Report on the Human Remains. By G. Elliot Smith, M.A., M.D., Ch.M., F.R.S., and F. Wood Jones, M.B., B.Sc. (The accompanying plates are bound separately.) Price £E.2.

OLIVER AND BOYD, Edinburgh and London.

Food and Feeding in Health and Disease. A Manual of Practical Dietetics. By Chalmers Watson, M.D., F.R.C.P.E. Price 10s. 6d. net.

PERLES, MORITZ, VERLAG VON, Seilergasse, Nr. 4, Wien und Leipzig.

Wiener Arbeiten aus dem Gebiete der Sozialen Medizin. Herausgegeben von Dr. Ludwig Teleky. Price K.5.20.

SCHOOL HYGIENE PUBLISHING COMPANY, LIMITED, 2, Charlotte-street, London, W.

The Care of Invalid and Crippled Children in School. By R. C. Elmslie, M.S., F.R.C.S. Price 1s., post free.

SMITH, ELDER, AND CO., London.

The Child's Inheritance, its Scientific and Imaginative Meaning. By Greville Macdonald, M.D. Price 12s. 6d. net.

SPRINGER, JULIUS, Berlin.

Einführung in die experimentelle Therapie. Von Dr. Martin Jacoby. Price, paper, M.5.; bound, M.5.80.

Die experimentelle Chemotherapie der Spirillosen. (Syphilis, Rückfallfieber, Hühnerspirillose, Frambösie.) Von Paul Ehrlich und S. Hata. Mit Beiträgen von H. J. Nichols, New York, J. Iversen, St. Petersburg, Bitter, Kairo, und Dreyer, Kairo. Price, paper, M.6; bound, M.7.

STEINHEIL, G., Paris.

Radiométrie Fluoroscopique. Par le Docteur H. Guilleminot. Price Fr.2.50.

THACKER, SPINK, AND CO., Calcutta and Simla. (THACKER, W., AND CO., London.)

Sewage Disposal in the Tropics. By William Wesley Clemesha, M.D. Vict., D.P.H., Major, I.M.S., Sanitary Commissioner, Bengal. Price 15s.

VIGOT FRÈRES, Paris.

Manuel Pratique de la Lithotritie. Par F. Cathelin. Price Fr. 4.

VOGEL, F. C. W., Leipzig.

Handbuch der Kinderheilkunde. Herausgegeben von Prof. Dr. M. Pfaundler und Prof. Dr. A. Schlossmann. Das Handbuch erscheint in vier Bänden. Band III. und Band IV., 2. Auflage. Jeder Band kostet M.12.50 brosch.; M.15.-geb. (Der Kauf des ersten Bandes verpflichtet zur Abnahme des kompletten Werkes.) Fünfte Band (Erster Ergänzungsband). Chirurgie und Orthopädie im Kindesalter. Von Professor Dr. Fritz Lange und Priv.-Doz. Dr. Hans Spitzy. Price M.20.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAKER, JOHN, M.D. Aberd., has been appointed Medical Superintendent of the State Criminal Asylum, Broadmoor.

BANKART, A. S. BLUNDELL, M.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Queen's Hospital for Children.

COOK, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer at Coff's Harbour, New South Wales, Australia.

COOMBE, RUSSELL, M.D. Cantab., F.R.C.S. Eng., has been appointed Honorary Consulting Surgeon to the Lyme Regis (Dorset) Cottage Hospital.

COOPER, HARRY JOSEPH, M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Lyme Regis (Dorset) Cottage Hospital.

DRYLAND, G. W., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Kington District of the county of Hereford.

DUNCAN, JOHN D. C., M.B., Ch.B. Edin., has been appointed Resident Medical Officer, Department of Agriculture, Commerce and Tourists, New Zealand.

EVANS, D. GORDON, M.B., B.S. Lond., has been appointed House Physician to the Royal Free Hospital, Gray's Inn-road, W.C.

FOULERTON, H. P., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Deputy Medical Superintendent of the State Criminal Asylum, Broadmoor.

GREEN, THOMAS ARTHUR, M.D., C.M. Edin., F.R.C.S. Edin., has been appointed School Medical Officer to the Bristol Education Committee.

HINE, ALFRED ERNEST BARRATT, L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer to the Lyme Regis (Dorset) Cottage Hospital.

HUGHES, W. STANLEY, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P Lond., has been appointed Medical Superintendent of the North Wales Counties Asylum, Denbigh.

KANE, F. W., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Honorary Physician to the Queen Victoria Maternity Home, New South Wales, Australia.

LLOYD, TIMOTHY J., L.R.C.P. & S. Irel., has been appointed Deputy Medical Officer of Health for the Frome (Somerset) Rural District Council.

LOWRY, J. A., M.D. R.U.I., has been appointed Medical Superintendent at the County Asylum, Brookwood, Surrey.

MACCULLOCH, STANHOPE H., M.B., C.M. Edin., has been appointed a Member of the Metropolitan Board for Invalidity and Accidents Pensions, New South Wales, Australia.

OGILVY, ALEXANDER, M.D., B.Ch., B.A.O. Dub., F.R.C.S. Irel., has been appointed Honorary Surgeon to the Bristol Eye Hospital.

OVERSLEY, EDITH, M.B., Ch.B. Glasg., has been appointed Assistant Medical Officer to the Colchester Education Committee.

PRIDMORE, J. W., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ryde District of the county of the Isle of Wight.

ROBERTS, H. H., M.B., Ch.B. Edin., has been re-appointed Medical Inspector of School Children to the Llanelly Urban Education Authority.

RODERICK, S. J., M B., C.M. Edin., has been re-appointed Medical Inspector of School Children to the Llanelly Urban Education Authority.

SPURR, JAMES, L.R.C.P., M.R.C.S., has been appointed Medical Officer to the Lyme Regis (Dorset) Cottage Hospital.

STEWART, ARTHUR A., M.B., Ch.B. Glasg., has been appointed Public Vaccinator for the District of Otautau, New Zealand.

VICKERY, D. H., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer by the Crediton (Devon) Board of Guardians.

WILLIAMS, S., M.D. Lond., has been re-appointed Medical Inspector of School Children to the Llanelly Urban Education Authority.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALBERT DOCK HOSPITAL, Connaught-road, E.—Senior House Surgeon. Salary £100 per annum. Also House Surgeon. Salary £80 per annum. Both with board, residence, and washing. Each for six months.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100, with board, residence, and laundry.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer, unmarried. Salary £200 per annum, with rooms, fire, light, and attendance.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, washing, &c.

BODMIN, CORNWALL COUNTY COUNCIL.—County Medical Officer of Health. Salary £500 per annum.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer unmarried. Salary £160 per annum, with rooms, coals, gas, and attendance.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Honorary Dental Anæsthetist.

CARDIFF INFIRMARY (GENERAL HOSPITAL). Senior Resident Medical Officer. Salary £120 per annum, with board, washing, and apartments.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant.

CRICHTON ROYAL INSTITUTION.—Two Crichton Fellowships in Pathology and Bacteriology. Salary £250 per annum each, with board, quarters, attendance, and laundry.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, &c.

DUMFRIES, CRICHTON ROYAL INSTITUTION.—Junior Assistant Physician. Salary £150 per annum, with board, quarters, attendance, and laundry.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Resident Medical Officer. Salary £100 per annum, with board, residence, and laundry.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

FRENCH HOSPITAL, 172, Shaftesbury-avenue, W.C.—Second Resident Medical Officer, unmarried. Salary £50 per annum, with board and laundry.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with rooms, board, and washing.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Ophthalmic Surgeon.

INFANTS' HOSPITAL, Vincent-square, Westminster.—Physicians' Assistant. Salary £80 per annum.

ITALIAN HOSPITAL, Queen-square, W.C.—House Surgeon for six months. Salary £60 per annum, with board and residence.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board, apartments, and washing.

LONDON HOSPITAL, E.—Medical Officer in charge of Department of Electrical and Physical Treatment.

LONDON TEMPERANCE HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £75 per annum.

MAIDSTONE, KENT COUNTY OPHTHALMIC HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

MANCHESTER ROYAL INFIRMARY.—House Surgeon for six months. Salary at rate of £100 per annum, with board and residence.

NEW HOSPITAL FOR WOMEN, Euston-road.—House Physician, Resident Obstetric Assistant, Clinical Assistant for Saturdays, and Anæsthetist (all females).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner.

ROYAL HOSPITAL OF BETHLEM, Lambeth-road, S.E.—Resident Physician and Medical Superintendent. Salary £750 per annum.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Assistant House Surgeon for six months. Salary £20, with luncheon and tea. Also Clinical Assistants for six months.

SHEFFIELD CHILDREN'S HOSPITAL, EAST END BRANCH.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £82 per annum, with board, residence, and laundry.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

TORQUAY, TORBAY HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, washing, &c.

UNIVERSITY OF LONDON.—Examiners.

WARMINSTER UNION, Wilts.—District Medical Officer and Public Vaccinator. Salary £90 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry allowance provided.

WESTMINSTER HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board and residence.

YORK COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Act at Barnet, in the counties of Hertford and Middlesex; and at Ballyward, in the county of Down.

THE Secretary of State for the Home Department gives notice of a vacancy for a Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuits Nos. 40 and 42, more particularly to Bow, Shoreditch, Bloomsbury, and Whitechapel County Courts.

Births, Marriages, and Deaths.

BIRTHS.

BURGESS.—On Nov. 2nd, in London, the wife of J. Hay Burgess, M.B., F.R.C.S., Capt., I.M.S., of a daughter.

HUMPHRY.—On Nov. 1st, at St. John's-street, Chichester, the wife of Philip R. Humphry, M.R.C.S., L.R.C.P., of a son.

ROBERTS.—On Nov. 5th, at Kalimpong, Bengal, the wife of C. L. Digby Roberts, M.B., Ch.B. Edin., Church of Scotland Mission, of a daughter. (By cable.)

WEBB JONES.—On Oct. 21st, at Henrietta House, London, the wife of A. Webb Jones, F.R.C.S., of a son.

WILSON.—At College-crescent, Fitzjohn's-avenue, N.W., the wife of J. Clark Wilson, M.D., M.R.C.P., of a daughter.

WOOD.—On Oct. 31st, at Wrington, Somerset, the wife of W. Vincent Wood, M.R.C.S., L.R.C.P., of a daughter.

DEATHS.

BINGHAM.—On Nov. 2nd, at Derby, John Joseph Bingham, M.D., of Alfreton, Derbyshire, aged 66 years.

CLARK.—On Nov. 4th, at Cross Deep, Twickenham, William Thomas Marston Clark, M.R.C.S., L.R.C.P., D.P.H., aged 53 years.

HOLMESTED.—On Nov. 5th, 1910, at Tuxford, Notts, Charles Wakeham Holmested, L.R.C.P., L.R.C.S., aged 63 years.

LORD.—On Nov. 5th, at Woodfield-avenue, Ealing, Richard Lord, M.D., M.R.C.S., in his 73rd year.

IN MEMORIAM.

IN memory of Henry Hugh Clutton, M.C. Cantab., F.R.C.S., of 2, Portland-place, who passed away Nov. 9th, 1909, aged 59.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HATTERS' "NEW DISEASE."

A CASE of importance to the hatting industry came before Judge Brown, K.C., at the Hyde county court last month, and the decision of the judge was reserved till recently, the questions at issue not being quite easy. The applicant was a working hatter and sought compensation for mercurial poisoning. The theory is that the mercury got into the system by being inhaled from the fur impregnated with it. The mercury was probably used in the form of corrosive sublimate for the preservation of the skins. In his judgment his honour doubted whether a workman could be said to be employed in a process, &c., when the employer did not provide the mercury or even know it was there. His honour thought not, and said "it would open a very wide door if it were otherwise, and would establish liability wherever an employer used in his business any article procured elsewhere by him, which wholly or in part was made of, or contained, or was even impregnated with lead, mercury, phosphorus, or arsenic." The judge was of opinion that Schedule III. of the Workmen's Compensation Act only referred to a process in which the employer himself used the mercury in the ordinary acceptation of the term, and therefore that this case was not within the Act. He dismissed the application with costs and invited an appeal. If this is the law, the judge had no choice as to what his decision must be. But it tells heavily against the workers, and to the non-legal mind it does not seem equitable that they should be exposed to such risks without a chance of compensation. The obvious thing would be, as it seems, to get rid of the poisonous impregnation to prevent the danger to health and life, against which at present there appears to be no protection.

LEICESTER MEDICAL UNION AND THE PEARL LIFE ASSURANCE COMPANY.

To the Editor of THE LANCET.

SIR,—I have been requested to forward you the following resolution, passed unanimously at the last meeting of members, which it is hoped you will insert in your journal:—

[RESOLUTION.]

"That the members of the Leicester Medical Union strongly disapprove of the new scale of fees proposed by the Pearl Life Assurance."

I am, Sir, yours faithfully,

Leicester, Nov. 7th, 1910. DOUGLAS BRYAN.

WANTED, A SUGGESTION FOR TREATMENT.

To the Editor of THE LANCET.

SIR,—In reply to "M.D.'s" appeal in THE LANCET of Nov. 5th, p. 1392, may I venture to suggest to him that, if he is free from any cause which may set up reflex irritation, such as enlarged prostate, renal or cystic calculus, &c., he would obtain relief from his enlarged knee-joints by applying two blisters, each 4 × 2, one on each side of the last dorsal vertebra. He will find full directions regarding this mode of treatment on p. 929 of THE LANCET of Sept. 24th last, where he will also find the reasons for adopting it.

I am, Sir, yours faithfully,

Nov. 8th, 1910. P. W. L.

OLD MEDICAL BOOKS.

AMONG a three days' sale of books at Sotheby's recently were included a few lots of medical interest. A black letter by Ulric von Hutten, "Of the wood called Guaiacum that healeth the Frenche Pockes, and also helpeth the Goute in the feete, the Stone, Palsey, lepre, dropsy, fallynge evil, and other diseases, translated into Englyshe by Thomas Paynall," small 4to, 1540, was sold for £8 15s. Another black letter, a fine copy, of Nicholas Monardus' "Joyful Newes out of the New-found Worlde wherein are declared the rare and singular vertues of divers Herbs, Trees, Plantes, Oyles and Stones, with their applications, as well to the use of Phisicke as of Chirurgery," 1596, brought £6 7s. 6d. "The Herball of J. Gerarde," 1636, 24s. "Select Observations on English Bodies: or Cures both Empericall and Historicall, performed upon very eminent Persons in desperate Diseases ..... now put into English by James Cooke," 1657. This was in original calf, and the catalogue stated "no portrait." The auctioneer was of the opinion that no portrait was issued with this edition. It realised £13.

AN INFANT KILLED BY CREASOTE AND A "COMFORTER."

IN the Hackney coroner's court the death of an infant, 13 weeks of age, was recently proved to be due to the following circumstances. The mother, the wife of a warehouseman, went out shopping, leaving the deceased alone with her two other children, whose ages were respectively eight and three years. The younger of these had seen his mother give the infant one of the objectionable rubber teats, known to ignorant mothers by the name of "comforters," and had also seen her dip it in a bottle of essence of aniseed before giving it to the baby to suck. The child of three proceeded to do this, but dipped the comforter in a bottle of creasote which stood on the mantelpiece where the aniseed was kept. The medical evidence given was to the effect that death, the immediate cause of which was bronchitis, had been accelerated by injury due to the creasote, and the jury returned a verdict of "Accidental death," the coroner making the observation that the case might serve as a warning to parents to keep dangerous things out of the reach of their children.

THE DESTRUCTION OF FLEAS.

To the Editor of THE LANCET.

SIR, Could any of your correspondents give an effective way of (1) destroying the pulex irritans: (2) keeping them off the person, the usually given methods having failed. A recent writer has stated that three parts of their life is spent on the ground, and anyone accustomed to stand by the bedsides of the sick poor can confirm this.

I am, Sir, yours faithfully,

Nov. 5th, 1910. MEDICUS.

SUPERSTITIOUS REMEDIES.

A CORRESPONDENT sends us the following list of "remedies," drawing our attention to the almost incredible fact that such superstitions still linger in out-of-the-way places in Ireland and Wales. The first five remedies are for epilepsy, and come from Roscommon:—

1. Where a person falls at the time of a first attack, if on a flagged pavement or in a court, at once lift a flag. Kill a fowl and cut a piece of the warm flesh. Place the bit of fowl with a silver coin in the hole and replace the flag, and there will be no return of the fit.

2. A child fell on a road on her way to school, having an attack of epilepsy for the first time. An old woman ran from her house and said "Don't touch the child." She then undressed the girl and taking the chemise she burnt it, then re-dressed the girl with a new chemise in place of the burnt one.

3. Dig a hole in the road where the person falls and put in a silver coin.

4. Procure the water in which a corpse has been washed and give a wineglassful to the patient three times a day. [This remedy was tried on the brother of the informant, but as he vomited the cure was of no avail.]

5. Procure the milk of a foal (not a mare), which is very rare, and give a teaspoonful three times a day.

For warts the following receipt is held good in County Mayo:—Cut 12 pieces of straw with the joints in the centre of each piece, place them in a hole in the ground, and as they decay the warts will wither.

For shingles an old Welsh gardener told his mistress that he was able to cure the affection by passing his hands over the affected parts, as he was the great-grandson of a man who had shot and eaten a bit of an eagle, which had given him and his descendants this miraculous power.

"*Hollins Cross.*"—The meat solution was analysed by THE LANCET and the report appeared in Vol. I., 1899, p. 240. According to Dr. Robert Hutchison (Food and Dietetics, London, Edward Arnold) it is made in the following way: Beef is chopped up finely and placed in jars, with its own weight of 2 per cent. hydrochloric acid. The mixture is heated in a Papin's digester for 12 to 15 hours with occasional stirring, till all the fibres of the meat are loosened. It is then rubbed up in a mortar to a fine paste and again heated under pressure for 15 to 20 hours. It is finally neutralised with carbonate of soda and made into a paste with water. The result is a fine "sludge" of finely divided meat fibre, part of which has been converted into peptone. One tin, which is recommended as a day's ration, contains half a pound and costs 2s. It is supplied by H. Potha and Co., 4, 5, 6, Bury court, St. Mary Axe, E.C.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1910:—

Nov. 4th–12th (London).—Ninth International Motor Exhibition.
" 7th–12th (Cape Town).—Twelfth South African Medical Congress (1910).
" 11th–19th (London).—Stanley Exhibition.

In 1911:—

Feb. 20th–25th (Cairo).—Fifth International Congress for the Blind.
May–October Dresden).—International Hygiene Exhibition.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September Brussels).—Exhibition of Fractures.
Sept. 11th–16th (The Hague).—Thirteenth International Congress on Alcoholism.
" 18th–25rd (Sydney).—Australasian Medical Congress.
" 24th–30th (Rome).—International Congress on Tuberculosis.
" 25th–29th (Rome) Seventh International Congress of Dermatology and Syphilology.

October (Cologne).—International Congress of Criminal Anthropology.

In 1912:—
September (Prague).—International Congress of Radiology and Medical Electrology.
September (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
September (Washington, D.C.).—Fifteenth International Congress of Hygiene and Demography.

In 1913:—
(London).—Seventeenth International Congress of Medicine.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

Papers:
Professor Robert T. B. Wild: Pharmacology and Therapeutics of Sulphur and some of its Compounds.
Dr. H. Hume Turnbull: The Therapeutic Use of the Digitalis Group.

PATHOLOGICAL SECTION (Hon. Secretaries—C. Bolton, J. C. G. Ledingham): at 8.30 P.M.

Professor A. Powell: The Bentley-Taylor Method of Mounting Mosquitoes.
Dr. B. Bradley: The Biological Characteristics of B. Typhosus, with Special Reference to the Fermentation of Dulcitol and Cyobinose.
Dr. C. Bolton: The Effects of Diet upon the Formation and Healing of Acute Ulcer of the Stomach.
Dr. Firth and Dr. Ledingham: A Typical Chloroma.
Dr. Petrie and Dr. O'Brien: Experimental Production of the Carrier-state by Feeding.
Dr. Firth, Dr. Bainbridge, and Dr. Ledingham: Case of Fatal Infection associated with the B. aertryck.
Mr. S. G. Shattock and Dr. L. S. Dudgeon: Dried Mouse Cancer.

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—H. G. Adamson, J. H. Sequeira), at 11, Chandos-street, W.: at 5 P.M.

Cases:
Dr. A. Whitfield: Parakeratosis Variegata (?).
Dr. H. G. Adamson: Pemphigus Foliaceus of 16 Years' Duration.
Dr. Graham Little: (1) Mycosis Fungoides (with sections); (2) Granuloma Annulare.
Dr. Winkelried Williams: Parakeratosis of Finger of 20 Years' Duration, following a Dissection Wound.
And other cases.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—H. J. Marriage, Sydney Scott), at 11, Chandos-street, W.: at 5 P.M.

Cases and Specimens:
Mr. Arthur Cheatle: Congenital Malformation of Pinna.
Dr. H. J. Davis: (1) Venous Thrombosis of both Orbits and Cavernous Sinuses, following Mastoid Disease; (2) Thrombosis of Internal Jugular extending to the Sternum in a Supposed Case of Enteric Fever with Mastoid Disease.
Mr. Sydney Scott: (1) Lateral Sinus Thrombosis developing after Operation for Acute Mastoid; (2) Specimen showing Otitic Retro-cerebellar Abscess.
Dr. Dan McKenzie: Infiltration of Both Auricles (? Chronic Lymphangitis).
Mr. C. E. West: Chronic Dermatitis of the Pinna due to Infection by Staphylococcus Aureus, under Treatment by Vaccine.
Mr. H. J. Marriage: Large Tubercular Polyp removed from the Middle Ear in an Injant aged 7 Months.
And other cases and specimens.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—Reginald Morton, G. Harrison Orton): at 8.30 P.M.

Paper:
Dr. Alfred C. Jordan: The Röntgen Ray Examination of the Œsophagus.
Dr. Stanley Melville: Demonstration of a New Tube Stand.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8 P.M., Clinical Meeting. Cases will be exhibited by Dr. Voelcker, Mr. Fairbank, Mr. M. Heath, Mr. D. Fitzwilliams, Mr. Ashdowne, Mr. Barker, Dr. J. W. Carr, Mr. C. Symonds, Mr. H. French, and Mr. W. Low.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—8.30 P.M., Sir Rubert Boyce: Yellow Fever in West Africa (with lantern demonstration).—Dr. S. T. Darling: Autochthonous Oriental Sore in Panama.—Dr. R. F. Jones: Tropical Diseases in British New Guinea.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Pernet: Clinique (Skin). 5.15 P.M., Lecture:—Mr. T. C. English: Surgical Affections of the Stomach.

TUESDAY.—4 P.M., Dr. G. Rankin: Clinique (Medical). 5.15 P.M., Lecture:—Dr. F. de H. Hall: Lymphadenoma and Intermittent Pyrexia.

WEDNESDAY.—4 P.M., Mr. C. R. Nitch: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. A. Latham: The Administration and Value of Tuberculin in Various Forms of Tuberculosis.

THURSDAY.—4 P.M., Mr. P. J. Freyer: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. T. C. English: Gall-stones.

FRIDAY.—4 P.M., Mr. G. French: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Bidwell: Rupture of a Gastric Ulcer.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Pritchard: Medicine.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Mr. Beddard: Practical Medicine.

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. R. H. Cole: The Social Aspects of Insanity.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pardoe: The Cardinal Symptoms of Urinary Disease (Surgical).

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. R. Wells: Differential Diagnosis of Early Forms of Insanity.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Mr. R. Howard: Some Clinical Aspects of Intracranial Tumours.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. R. Bradford: Sciatica.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).

TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical; Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient: (Dr. A. J. Whiting.) 4.30 P.M., Lecture: Mr. H. Evans: Treatment of Urethral Obstruction.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture-demonstration:—Mr. A. de Prenderville: Anæsthetic Technique for Operation on the Nose and Throat.

FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. Howell Evans). 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR SICK CHILDREN (UNIVERSITY OF LONDON), Great Ormond-street, W.C.

MONDAY.—5.15 P.M., Demonstration:—Dr. J. H. Thursfield: Food and Food Diseases—The Treatment of Artificially Fed Children; Symptoms; Loss of Weight, Screaming, Vomiting, Colic (Special Post-Graduate Course.)

TUESDAY.—5.15 P.M., Demonstration:—Mr. H. A. T. Fairbank: Deformities—Infantile Paralysis of Arm and Leg. (Special Post-Graduate Course.)

WEDNESDAY.—5.15 P.M., Demonstration:—Dr. J. H. Thursfield: Food and Food Diseases—Diarrhœa (1) Acute, (2) Chronic; Treatment; Infantile Atrophy. (Special Post-Graduate Course).

THURSDAY.—4 P.M., Lecture:—Dr. Hutchison: "Consumptive Bowels."
FRIDAY.—5.15 P.M., Demonstration: Mr. H. A. T. Fairbank: Deformities—Flat Foot, Hammer-toe, Hallux Valgus, Spastic Paralysis. (Special Post-Graduate Course.)

LONDON HOSPITAL MEDICAL COLLEGE, Clinical Theatre, London Hospital, Mile End-road, E.

TUESDAY.—1 P.M., Clinical Surgery Lecture:—Mr. E. H. Fenwick: Removal of the Urinary Bladder.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. Ormerod.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. S. A. K. Wilson: Syphilis and Muscular Atrophy.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Jex Blake: Cardiac Arrhythmia.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis—Treatment (Constitutional and Local in all its Forms).

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. E. B. Leech: Constipation. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.),

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (19th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 9th, 1910.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 3	29·25	W.	0·03	65	47	37	38	39	Cloudy
,, 4	29 28	W.	0 43	65	48	39	40	41	Cloudy
,, 5	29 46	W.	...	56	47	35	36	36	Foggy
,, 6	29 45	W.	..	56	52	35	37	39	Cloudy
,, 7	28·85	S W.	0·11	77	50	37	43	45.	Cloudy
,, 8	29·43	W.	0·06	71	49	41	41	42	Cloudy
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